

THE BEST SELLING MAGAZINE FOR THE

**AMSTRAD PCW**

ISSUE 38 • NOVEMBER 1989 • £1.75

# 8000 PLUS

8256 • 8512 • 9512

## Composer's Pen

Latest hit package reviewed

- IQ PORTABLE
- C PROGRAMMING
- SUPERCALC 2
- DAISY WHEELS
- LOCOSCRIPT

WIN A MODEM • WOMEN IN COMPUTING • TIPOFFS



## FACSIMILE

BROTHER FAX  
16 shades  
Touch Dial, Group 3  
£499

FAX CARD  
C FAX SRI £199

FREE 1 DAY'S TRAINING (8 hours)  
When you buy complete IBM  
compatible system. Well worth it.  
Call now for details

ALL PRICES EXCLUDE VAT

CANON BJ130 Ink Jet Printer £575

IBM COMPUTERS

DISCOUNT 25%

TOSHIBA PORTABLES  
DISCOUNT 25%

## SOFTWARE

Full software list inc:

LOTUS 123 SAGE  
ASTON TATE MICROSOFT  
DIGITAL (GEM) SuperCalc  
Multimate Ventura  
Smart Ability  
WordStar Clipper  
WordPerfect

ALL ACCESSORIES AT LOW, LOW PRICES  
MIN 25% DISCOUNT ON ALL PTAS

## SAMSUNG

3000 DD	£525
3000/20Mb HD	£745
6000 SD	£895
6000/20Mb HD	£1120
3000/Single Drive	£460

ON SITE MAINTENANCE  
COMES FREE! WITH SAMSUNG  
HARD DISK

21 Mb Hard Card	£1.99
32 Mb Hard Card	£2.19

## THE STAR COMPUTER PRINTERS

LC10  
145

LC24-10  
199

LC10  
COLOUR  
175

**JEM**  
COMPUTERS

## AMIGA 500

A500 + TV Modulator  
+ Accessories £299  
A500 + TV Modulator +  
Return of the Jedi - Custodian  
Mercenary - Warlocks Quest  
Zynaps - Hellbelt - Powerplay  
Eliminator - 28 Public Domain  
Games £320

## AMIGA 500

Ram Expansion £99

Second Drive £75

COMMODORE B2000  
XT Bridge Board,  
Philips 883  
20Mb Hard Disk £1249

## ATARI ST

Atari 1 Mb Explorer Pack  
£220

Atari 1Mb + SM124  
£320

SUPER PACK: 21 Games +  
Organiser Software  
Database  
Spreadsheet WP £290

## COMMODORE

	MONO	COLOUR EGA	
PC 10 SD	£460	£599	£749
PC 10 DD	£589	£739	£875
PC 20 HD	£779	£989	£1089
PC 40 SD	£1065	—	£1270
PC 40 HD	£1393	—	£1557

## TANDON

	MONO	EGA	VGA WHITE	VGA COLOUR
PCA20+	£999	£1281	£1184	£1361
PCA40+	£1119	£1290	£1270	£1482
PCA70+	£1279	£1555	£1480	£1286
PCA286	£938	£1216	£1089	£1266
DATAPAC 30Mb	£165			
386 16-40Mb	£1688	£1949	£1840	£2036
386 20-40Mb	£2099	£2389	£2262	£2489
386 20-70Mb	£2250	£2523	£2399	£2599

## AMSTRAD COMPUTERS

PCW 8256	£312
PCW 8512	£379
PCW 9512	£399

MONO COLOUR

PC 1512 SD	£357
PC 1512 DD	£439
PC 1512 20Mb	£515

MONO

COLOUR

EGA

PC 1640 SD	£455
PC 1640 DD	£509
PC 1640 HD 30	£685

MONO

COLOUR

EGA

PC 1640 HD 30	£779
---------------	------

## PC 2000 SERIES

	MONO	COLOUR	COLOUR	COLOUR
PC 2086 SD	£500	£580	£660	£740
PC 2086 HD	£560	£580	£660	£740
PC 2086 HD30	£720	£800	£880	£960
PC 2286 SD	£868	£953	£1040	£1126
PC 2286 HD40	£1040	£1126	£1213	£1299
PC 2396	£1732	£1819	£1905	£1992

5½" 360K External Drive for PC2000 £155  
5½" 1.2Mb External Drive for PC2000 £165

## PRINTERS

	9 PIN		
MT81	£110.00	LX800	£150.00
CIT 120D	£120.00	KXP1061	£120.00
STAX LC10	£145.00	CIT 180E	£145.00
Seikosha 180A	£115.00	LC10COL	£175.00

## 24 PIN

Seikosha SL80A	£235.00	LC24-10	£199.00
NEC P2200	£255.00	Epson LQ500	£255.00
KXP1124	£255.00		

## LASER

Brother H18	£1400	Canon LPB88	£1275
Star Laser 8	£1230	KXP4450	£1350
Hermes 800	£1099	HP LaserJet II	£1270
MT905	£950		

TEL · 0202 · 740131

406 Ashley Road,  
Park Stone,  
Poole,  
Dorset.

**COURIER  
DELIVERY  
£5**

# 8000 PLUS

# OPENING MENU

FUTURE PUBLISHING  
4 QUEEN STREET  
BATH BA1 1EJ  
TEL +0225 446034  
FAX +0225 446019

EDITOR  
Steve Patient

PRODUCTION EDITOR  
Sarah Bradley

STAFF WRITER  
Tim Smith

ART EDITOR  
Julie Barnes

ART ASSISTANT  
Paul Morgan

AD PRODUCTION  
Fiona Milne

ADVERTISEMENT  
MANAGER  
Elaine Brooks

PUBLISHER  
Kavin Cox

FUTURE PUBLISHING  
THE OLD BARN  
SOMERTON TA11 7PY  
TEL +0458 74011

MAIL ORDER QUERIES  
Sarah Richards  
TEL +0458 74011

SUBSCRIPTION  
ENQUIRIES  
Christine Stacey

COVER ILLUSTRATION  
LAURA COOPER  
TEL +0272 427510

COLOUR ORGANISATION  
DP GRAPHICS  
HOLT, WILTS  
TEL 0255 755004

PRINTING  
CHASE WEB OFFSEt  
ST. AUSTELL, CORNWALL

DISTRIBUTION  
COMG  
WEST DRAYTON  
MIDDLESEX UB7 7QE

© FUTURE PUBLISHING LTD

8000 Plus is an independent publication. Future Publishing Ltd have no link with Amstrad plc. We welcome unsolicited manuscripts - please enclose a SAE with submission if return of the material is required. Payment for accepted articles is £100 per 1000 words after publication.

We take great care to ensure that the information in this publication is accurate and reliable. We cannot accept liability for any mistakes or omissions. Part of this publication may be reproduced in any form without our permission.

ABC Jun - July 89 30,585

## 5 NEWS PLUS

You read it here first

## 10 COMPOSER'S PEN

Producing musical manuscripts on your PCW

## 14 CP/M

The PCW exerts a controlling influence

## 17 THE THIRD DRIVE

Getting even more in and out of your machine

## 20 COPYRIGHT ACT

The rights and wrongs

## 24 NSW

The Public Domain file manager examined

## 26 LOCOSCRIPT PAGES

The good, the bad and the ugly

## 29 THE PC SHOW

Steve Patient reports from Earls Court

## 33 AVON

Rod Lawton takes a look at the new game from Topologika

## 34 SHARP IQ

The Filofax with a difference!

## 39 CASE IN POINT

We visit the company who export training

## 43 DAISYWHEELS

How to print in tongues

## 46 WOMEN IN COMPUTING

The girls who say sex doesn't matter

## 50 LOOK AND C

An overview of a programming heavyweight

## 53 SUPERCALC

Finally - the secrets of the black box revealed

## 57 LANGFORD

Ansible Information throws wide its doors

## 59 LISTINGS

More BASIC listings to type in

## 67 TIPOFFS

The answer to all your problems - including those you don't have

## 75 GOOD SOFTWARE GUIDE

Word processors, accounts/payroll, utilities and DTP

## 81 SPECIAL OFFERS

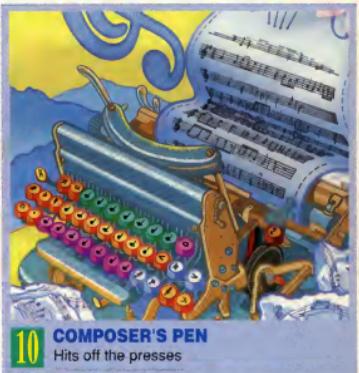
The bargains you can't afford to be without

## 86 POST SCRIPT

Back over to you

## 90 COMPETITION

Win a modem and get communicating!



## 10 COMPOSER'S PEN

Hits off the presses



## 17 THIRD DRIVE

John Hellis takes you through a step by step improvement



## 34 SHARP IQ

Definitely small - but is it friendly?

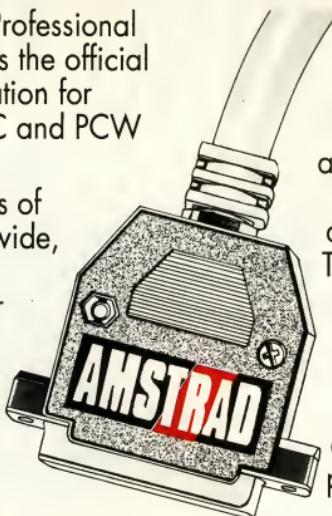


## 46 WOMEN IN COMPUTING

Their role in the industry

**T**he Amstrad Professional User Group is the official support organisation for Amstrad PC, PPC and PCW owners.

With thousands of members nationwide, the Amstrad Professional User Group has proved, beyond doubt, to be **the** essential add-on for Amstrad Computer Users.



Members enjoy On-Line Technical Assistance, Substantial Discounts on Hardware and Software, a monthly Magazine, Newsletter and Offers, Nationwide Training, Welcome Pack and choice of quality Free Gift upon joining.

Gold Card

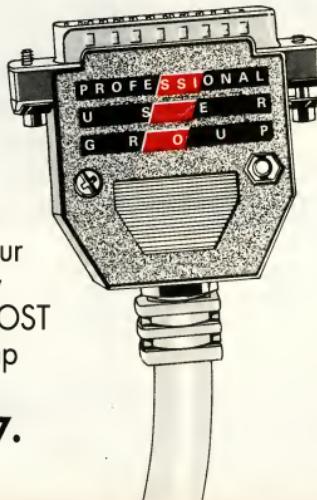
Membership is designed for the larger, possibly corporate user.

# THE ESSENTIAL ADD-ON

Silver Card Membership is for the standard scale Amstrad User.

For full details and our full colour brochure, simply return the FREEPOST coupon (no stamp required) or ring

**091 510 8787.**



Please send me Membership details of the Amstrad Professional User Group. I am resident in the U.K.

Name.....

Address.....

..... Postcode.....

Day Phone Number.....

Machine Type.....

Send to:

**Amstrad Professional User Group,  
FREEPOST, Sunderland SR1 1BR**



## FOREWORD

## Where it's at, man.

This is my last editorial for 8000 Plus – there, that got your attention, didn't it? So I thought I'd leave you with the (doubtful) benefit of my thoughts on the long term future of the PCW.

Of necessity magazines have to worry about the market they service, and get it pretty well right or die. 8000 Plus has gone from strength to strength over three years and is now bigger-selling and better than ever. If we hadn't got a realistic view of the PCW market we could never have done it. So why has the PCW succeeded so brilliantly when so many computer pundits pronounced it dead on arrival; and have ignored it ever since in the hope that it would go away and prove them right?

Clearly they got it wrong. What they saw was a rather dated-looking box full of eight bit technology, and an operating system that had been declared dead and then buried with the hippy movement. They saw this because they were looking to the computer manufacturers for a constant supply of techno-fixes instead of looking for solutions to real world problems.

Even now there is an element of 'wow, man, the colours!' to the computer press as they parade the latest monster from the baron's dungeons – bigger, faster, brighter and, of course, more expensive, before your eyes. All dead pan, as if there were some real prospect of you selling your house, spouse and children to put a deposit on it.

The power and excitement of computers lies in their flexibility, their ability to do so many things, but that's rarely what people buy them for in real life. People – and companies – usually buy them to solve specific problems. In so many ways the PCW was the first mature product for the home computer market. It offers a complete solution to a very common problem – the production and presentation of the printed word. If it did nothing else it would have been a success. The fact that you also get a good, general purpose computer is a bonus.

So how do I see the future? Through rose coloured glasses. There will still be people getting excellent service from their PCWs at the turn of the millennium. Write on, man.

Ste.

## Technical Writer Required

As you will have seen from this month's Foreword, there have been a number of staff changes at work in the 8000 Plus office. Steve Patient is moving to assume the role of Technical Editor with PC Plus, 8000's sister magazine, while Sharon Bradley takes over the hot seat from the beginning of the next issue.

We're now looking for a Technical Writer to complete the small but lively team charged with the impossible responsibility of putting together the best-selling magazine around for the PCW. We need somebody who has a) a sound working knowledge of the PCW and its operating system b) the ability to write with lucidity and zest on any aspect of those fields, and, finally, c) a sense of humour.

If you think you've got what it takes, apply in writing with a full CV to The Editor, 8000 Plus, 4 Queen Street, Bath, BA1 1EJ.

## Competition winners

It's always a pleasant duty to hand out prizes and this month brings double the pleasure. Due to the gremlins which plagued the LocoScript Competition from the very beginning, the winners were not named in last month's issue. So, with a hail of trumpets and fanfare of flowers, 8000 Plus would like to congratulate the following people who sold their house, spouse and children to put a deposit on it.

First prize went to Richard Canterbury from Newport. The runners up were, Mrs D H Craig from Stoke Newton, J T Anderson from the Isle of Wight, N B Turner from Whitstable and Dr J Wales from Sheffield.

To these victors go loads of Locomotive spoils. (We hope to be running another 'Spot the 8000 differences' competition soon!)

There was also last month's battle of wits to be won. Mr M A Claridge, again from the Isle of Wight put these immortal words of wisdom into the mouth of Jimmy Tarbuck to win a copy of HiSoft C:



The winning caption in last month's competition came from Mr. M A Claridge.

## NEWS PLUS

by Tim Smith

## Flipping Huge!

A new version of Flipper from Software Imperative should be available by the time you read this. Previous versions of this utility have enabled those PCW owners with 512k of memory on their machines to run two separate environments. For example LocoScript and SuperCalc running simultaneously. The new version will continue to provide this but, more importantly, it will also run in conjunction with Isenstein's RAM board.

During our tests on the board we realised that it couldn't handle Flipper due to the fact that the software looked for 512k of RAM. If it found anything other than this it assumed that 'not 512k' equals less than 512k. This problem has now been overcome.

The combination of Flipper and the RAM board should mean that the PCW owner now has access to two huge environments. Andy Wilton, the designer of Flipper, claims that it is now feasible to have LocoScript running in a full 512k of memory and still have 496k left to run CP/M based programs and utilities.

Designing this 'Turbo' Flipper was not the easiest job in the world however. The peculiarities of the RAM board mean, according to Andy Wilton, that '...the PCW's central processor can't fetch instructions from it. This isn't a problem if you just want to use the RAM as M: drive but does cause trouble when a piece of software tries to run code there.' This latter case was a thorn in Flipper's side due to the fact that a portion of it remains resident in the memory of the PCW. This is the 16k reserved message, familiar to Flipper users.

'The solution we ended up with,' continues Andy, 'should

make the new version of Flipper compatible not only with the Isenstein board but also any future memory add-ons produced by any manufacturer. From now on if a board works with an existing version of LocoScript 2 and CP/M it should work with Flipper.'

These claims are interesting on two levels. Firstly, Flipper will be the first piece of software written specifically with the RAM drive in mind. It is unlikely that it will be the last to make use of the massive expansion in the power of the PCW which the Isenstein board should provide. Secondly, the idea that someone else might be considering the production of a RAM upgrade is certainly a good sign for the future of the machine.

As yet we haven't run tests on Flipper with the RAM board. As soon as we do we will get the information. Obviously we won't be able to test claims that it will run with any board, well not until someone develops another one.

If you would like to find out more you can contact Software Imperative on (0453) 886931. Isenstein are on (0244) 822768.

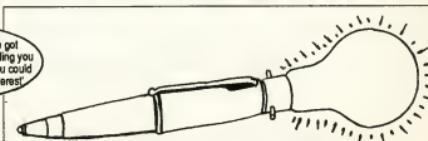
# FLIPPER

V2

•

**KISENSTEIN**

Two PCW heavyweights improving the power of your machine. But are there bigger plans afoot?



Dingby: What is the computer related word or phrase? No prizes but the answer's on page 8.

# THE WEST OF BRITAIN BUSINESS SERVICES

## You Must Add V.A.T. To Our Prices - Carriage Is FREE !

### COMPUTERS

Please note our prices include carriage but **you must now add VAT**

Amstrad PCW's - Free Disk Storage Box & 3" Disk Comprising Database, Graphics Pack, Psychological Test + Games etc.

Carrier Delivery Included in Price !

PCWB256 ..... £326.00

PCW512 ..... £408.65

PCW512 ..... £47.85

**COMPUTERS - PC XTs/386's**

Everex, IXC (XT & AT's), Samsung,

Commodore And Many More - Including:

\* The Executive Range From Osimcom \*

Send for our FREE catalogue

**Executive 8/10 Excellent Features,**

20Mb HD/M - Amber or Green ..... £759.00

20Mb HD/EGA ..... £1035.00

**Executive 286/15 With Disc Cache,**

20Mb HD - Amber or Green ..... £1025.00

44Mb HD - Green ..... £1259.00

44Mb HD - EGA - £1511.00 & VGA - £1599.00

Osimcom Now !!

\*\*\*\*\*

\* \* \* The New Sanyo Range Is Here ! \* \*

MBC-15 / EX XT Compatible 8088-2 16 Bit

MBC-15 / EX XT Compatible 8088-2 16 Bit C/Cs

MBC-15 / EX XT Compatible 8088-2 16 Bit C/Cs

Plus Laptops/Tower Systems/Laptops

\*\*\* SEND FOR FULL DETAILS & PRICES \* \*

\*\*\*\*\*

\* \* \* Link Your PC To A PC ! \* \*

If you wish to run your accounts on a PC but use your trusty PCW as a very cost effective workstation (and as a stand alone PCW) send for details of Compucom Accounts PC2PC system

\*\*\*\*\*

**SCHNEIDER - IBM Compatibles**

The full range is available, from W.B.B.S. at very competitive prices.

**Portable PC's -**

Amstrad CPC, Z80 Schneider AT etc

Printers come in all shapes and sizes

We can supply Daisylwys, Dot Matrix,

Lasers, Inkjet etc. Try us for: Citizen (With their 2 Year Guarantee), Amstrad including the

LC3500 & LC5000, Panasonic, Hewlett

Packard, Schenzer Laser, Sanyo and More!

**PCW HARDWARE**

Memory Upgrade - Prices Down !!! ..... £43.50

PCW 2nd Drive (FD4) ..... £13.00

**PACE 5.25" 2nd Drive -** with its own built in

interface. Comes with **FREE TDS & SuperDisk** and **Software** - very good value

We use one for data transfer from PCW/PC/CW!

PCW1 ..... £160.85

**S.C.A. Serial/Parallel Interface -**

With Real Time Clock ..... £50.25

Without Real Time Clock ..... £41.55

Margin Maker - aligns paper ..... £10.90

Perfect Margins - as above ..... £9.13

Spike Protector Plus - Helps Protect

Computers Against Power Surges ..... £0.25

\*\*\* HARD DISCS - EASY LIVING \*\*\*

Timatic 20Mb PCW Hard Disk ..... £495.60

Vortex 40MB PCW Hard Disk ..... £495.60

Diamond 32Mb PCW Hard Disk ..... £459.00

Diamond 32Mb PCW Hard Disk ..... £459.00

The Diamond Range Can Be Shared By

Multiple PCW's! Details Available On All

The Drives Mentioned Here.

PCW B256/8512 Shoulder Bag ..... £20.00

PCW 9512 Shoulder Bag ..... £29.00

PCWB0000's Printer Stand ..... £9.13

Any Width Printer Stand - Rugged ..... £14.75

Acoustic Hood for 9512 Printer ..... £32.95

Printer Cleaning Kit - PCWB000's ..... £14.60

Mouse Mats ..... £4.35

### MODEMS

**MIRACLE TECHNOLOGY MODEMS**

WS4000 ..... £147.80

WS4000/PCW, cw Integral Interface

For the PCW & Connecting Lead ..... £147.80

**PAC - MODEMS**

Linnet - Intelligent V24 V23 ..... £130.40

Cable to PCW Interface ..... £13.00

Dispul - Communications Software ..... £58.90

\*\*\*\*\*

### BBD DUST COVER SET

\* PCW/B256/8512 ..... £10.40

\* PCW512 ..... £12.13

\* PC1840/1512 state col or mono ..... £7.85 \*

\* Amstrad PPC ..... £5.20

\* Pace Disk Drive Cover ..... £5.00

\* Please State Model When Ordering \*

\*\*\*\*\*

### DISCS

CP2 3" for the PCW/PC ..... £10.00

CP2 3" for the PCW/PC ..... £5.00

3.5" 3.5" 1.44Mb ..... £10.00

5.25" Bulk Unbranded ..... £10.45

5.25" 3D/SD Disks ..... £10.00

5.25" 3D/SD Disks ..... £10.00

5.25" 3D/SD Disks ..... £10.00

DISK STORAGE

DS10/2C 3" 10" Holes ..... £6.00

AM30L (Amstrad Branded) ..... £11.00

DS40L 3.5" 5.25" (Lockable) ..... £8.50

TC1300 3.5" 5.25" (Lockable) ..... £10.20

CT-50.25" (Holds 50) Lockable ..... £8.50

DS10/2 5.25" (Holds 10) Lockable ..... £10.20

PRINTER RIBBONS

REFRESH! - Colour Inkjet Spray ..... £7.80

Extends ribbon life - up to 300 prints!!!

Executive Range Compatible Ribbons:

PCW B256 Carbon Multistripe ..... £6.51

PCW 9512 Carbon Multistripe ..... £6.51

PCW 9512 New Fabric Type ..... £6.00

AMSTRAD COMPATIBLE PRINTER RIBBONS

PCWB256 Carbon Fabric ..... £13.03

PCW9512 Carbon Multistripe ..... £13.03

PCW9512 Carbon Multistripe ..... £12.17

PCW9512 New Fabric Type ..... £12.17

NEW! - COLOUR RIBBONS

PCW 9512 Satin Fabric

Green / Red / Blue / Brown / Yellow / Purple / Magenta or Cyan.

Any 5" ..... £9.35

Any 4" ..... £23.30

Any 3" ..... £43.30

Many Other Ribbon Types Available \*

COMPUTER PAPER

11" x 9.5" Continuous

SP/30 1000 sheets ..... £7.00

SP/10 1 plain - 1000 sheets ..... £11.30

SP/10 1 plain - 2000 sheets ..... £15.60

SP/10 2 plain - 1000 sheets ..... £15.60

SP/10 2 plain - 2000 sheets ..... £24.30

11" x 14" Continuous

1 plain - 500 sheets ..... £9.00

1 plain - 1000 sheets ..... £12.50

1 plain - 2000 sheets ..... £22.50

A4 - (TRU) A4 80 gm - Continuous

1 plain - 500 sheets ..... £12.90

1 plain - 1000 sheets ..... £19.95

2000 x Plain white/micr perf ..... £33.50

A4 - (True A4) - Single Sheets

Plain white ..... £7.25

Plain white - 1000 sheets ..... £17.25

Labels - With Sprocket Holes

One Wide 3 1/2" x 7 1/8" ..... £7.25

One Wide 3 1/2" x 11" ..... £10.00

One Wide 3 1/2" x 1 7/16" ..... £22.50

One Wide 3 1/2" x 4" ..... £42.50

We strive hard to be the friendliest

and most helpful place around with

low prices and fast despatch that

will bring you back for

more & more !

Callers Welcome But Strictly By Appointment Please

Postage is FREE but you MUST ADD VAT

Cheques P.O.'s payable to "W.B.B.S."

WEST OF BRITAIN BUSINESS SERVICES LTD, 100, Llanfairfechan, LLANDELI, DYFED, SA19 6PR

OR PLACE YOUR CREDIT CARD ORDER BY FAX 9am-10pm Mon-Fri. (0586) 623923

GOVT DEPTS / LOCAL & EDUCATIONAL AUTHORITY ORDERS WELCOMED.

### SOFTWARE

Flipper - not PCWB256 ..... £26.00

Mini Office Professional Plus ..... £29.99

WORDPROCESSORS

Protect - The Full System ..... £34.50

Protect - The Basic System ..... £23.30

Protect Office (needs Protect) ..... £22.45

Pocket Protect - Wordpro. Only ..... £22.45

Swallowtail Software Presents:-

### PRO-EAZE

A complete set of business utility programs

for the serious user of Protect who does not

want to learn how to use the software to

program themselves. Comprises invoicing,

ordering, settlement of suppliers invoices and

many other useful documents (further details

upon request) only ..... £17.00

### WORTH GETTING PROTEXT FOR!

Looptile - with Looptile II ..... £24.20

Looptile II - Looptile II & Spell ..... £27.65

Looptile II - New Version ..... £24.20

Alan Lewis with his illustrated effort, wins the Hisoft Pascal 80 compiler.

**Tarby:** 'What is your advice for the aspiring young computer entrepreneur?'

**Alan:** 'Get yourself a good Korea.'

Finally, S P Doherty wins the Hisoft Nevada Cobol compiler with this effort:

**Tarby:** 'Hand-held microphones, Alan - a great idea but don't you think that you may be a little late again with this one?'

As we said the criteria for winning and losing was totally subjective and we'd like to thank to all those people who entered both competitions. If you didn't win there's always this month's devilish diversion which could net you a fast, furious, EC2400 modem.

### **Ghost of a Chance**

The PCW has a new game. Level Nine, the producers of the Ingrid series, have brought out a text adventure by the name of Scapeghost. You get to play an ex-policeman called In-spectre Alan Chance who died under dubious circumstances. Not only that, but since his death, he has been framed for crimes he didn't commit.

As the gallant bobby you are reincarnated in your old haunts. You are there to clear your own name and catch the bad guys, or gals. Not only do you have your detective's skills and growing psychic powers you also have the help of other spirits. The hitch, and there has to be one, is that you only have three nights to solve the puzzles.

The game is in three parts and features what Level Nine claim are high quality graphics. We will be reviewing the game as soon as possible. Scapeghost costs £19.95 and Level Nine can be contacted on (0934) 814 450.



**Level 9 Adventures**

Keep your eyes peeled for our exclusive review of the new spooky adventure from Level 9.

### **Dave, meet Dave**

When your discs corrupt and precious data appears lost there are a number of options: weep, reformat and lose all the data or call Dave's Disc Doctor Service Ltd. So many people have been taking the second course of action that Dave Smith, who instigated and works unpaid for the company, was starting to get snowed under. As he hates to get away any desperate users and their money (all of which goes to charity - predominantly BACUP - the British Association of Cancer United Patients) he needed help.

Dave Axford, who is associated with PCW-File and the BOOG bulletin board, offered his services and has joined the company. He is a sufferer of the debilitating disease Myalgic Encephalomyelitis or M.E. Consequently any profits he makes from the service will go to the M.E. Association.

Dave Axford joins the service as the first tranche of Company donations are made. £100 will go to BACUP and £300 each to Crisis at Christmas and the Samaritans.

The expansion of the service should allow many PCW owners to work a little more easily with their precious discs. If you ever have need of the service you should phone Dave Axford on

(0428) 56438 or Dave Smith on (08923) 5974. With that, it's goodnight from him and it's goodnight from him.

### **Reel them in**

Headline Communication are upgrading their successful range of Reeltime audio-disc training packages for the PCW. The new packages will be called, unsurprisingly, Reeltime Version 2.

Headline maintain that over the last three years they have trained over 100,000 users on various machines. In order to increase their market share they have decided to enter into dealership agreements as opposed to simply retailing their own wares. Along with the upgrade and the expansion of the company comes a free helpline for users of the tapes and all for £29.95. ▶



Upgrading the training with a difference: the new range of audio-disc packages for the PCW

# CLUB

### **The CP/M Show**

Gently overshadowing the recent PC Show was the CP/M (and MSDOS) User Group secondhand computer sale. Held at Spring Lodge Community Centre in Witham, Essex, it was rated a great success by everyone who attended. Fearlessly pitted against the first public day of the PC Show, the sale attracted more than 200 visitors to its impressive array of 18 stands, vendors and vendees appearing from as far afield as Kent.

Since the user group serves both CP/M and MS-DOS users, there was a mix of material on the software side. Most of it was MS-DOS stuff but the stands were groaning under the weight of CP/M literature. This ranged from slightly tattered copies of the famous *CP/M The Software Bus* (by Andrew Clarke *et al*) to some seriously dense documentation on GSX.

On the hardware side the range was even greater. There were many complete and working machines - mainly CP/M - including one machine running MP/M, the



No one need ever be short of a fact or three again

multi user version of CP/M. There were several Apple II machines and boards for them, hardly surprising since many were used with Z80 boards to run CP/M. But pride of place for any connoisseur of CP/M computers had to go to the rather grubby Epsom QX-10 selling for a derisory £150. This beautifully styled machine boasts two 5 1/4 inch disc drives and a high resolution 80 by 25 screen. For those who prefer their hardware this place was an Aladdin's cave of goodies. There were power supplies,

ancient (five years?) chip packed boards from extinct mainframes and a seemingly endless supply of cheap disc drives. But it never hurts to have a spare power supply with plus and minus five and 12 volts on it - really.

The CP/M User group sale made a profit of about £100; those who bought were delighted and everybody plans to do it again next year. We'd like to be there.

### **Hereford Awake.**

Yet another User Club has come to our attention. This one is based in Hereford and is run by David Rose.

The Hereford Amstrad User Group began with three members but has now expanded to fifteen. They meet on the first Wednesday of each month between 7pm and 9ish. In past meetings they have dealt with such topics as desktop publishing and a tour of 'The Money Manager'.

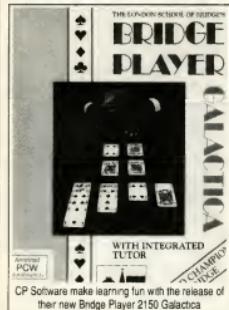
It would appear that there is a great deal going on in the west. The number to contact David Rose on is (0432) 267123.

# NEWS

## A bridge too near

CP Software have brought out a new Bridge game for the PCW called Bridge Player 2150 Galactica. It has been co-written with Ms Nicola Gardner, the winner of two world championships (1982, 1985) and 'a teacher of world class'.

The game comes with a comprehensive tutorial and 100 tutor hands. It has a post mortem facility, scoring of hands to rubber and special cheat options. We will most certainly be reviewing the package just as soon as we can. It's available from CP Software at £29.95. Their telephone number is (099382) 3463.



## Invoice of the people

Cornix Software have launched a new product called Cornix Invoicing. According to the company, the package is 'stand alone' and does not tie the user to a particular accounts package.

The program consists of a database to hold regular customer details, stock items and prices. Cornix say that it can handle blanket discount and settlement discount. It also offers a reports section which is said to be able to provide comprehensive invoice analysis, showing gross profit, sales figures for individual items or a range and a detailed listing of all invoices produced.

Information can be ported from the database into reports or can be entered manually. There is also a facility for storing standard paragraphs. It sounds interesting and as soon as we get a review copy we will give the package a thorough examination. It costs £59.95 inclusive of VAT. Cornix can be contacted on (0462) 422232.

## The return of the plastic case



They're finally back: the caring disc user's friend

SBS Computer Supplies have taken note of popular opinion. They have secured a large and regular supply of Maxell discs in plastic cases. The sudden demise of the protective casing caused many people anxiety a few months ago so this should come as very good news.

The SBS deal is this; ten CF2 3 inch discs are available at £19.95 plus postage and packing. Not only that, but they are also offering a free 3 inch disc drive cleaning kit worth £5.95 which will be sent with every order of 20 discs.

Sally Hayward the marketing manager for SBS commented that '...in order to satisfy the market we decided to stock the plastic cases again.' And very laudable that is. You should remember however that you have to buy the discs to get the plastic cases. If you wish to place your order you should phone (0273) 423523.

## Bottom feeding time

The Star LC-10 dot-matrix printer has long been a favourite buy for PCW owners. The company have now come up with a new range of reasonably priced nine pin printers

with the added advantage of extra wide carriages. The LC-15, for example, has been introduced, according to Star, '...to answer the demand for a wide-carried version of the LC-10'.

When these people say wide carriage they mean just that. They claim that A3 paper in landscape mode can be handled by the new printer. The LC-15 also comes with a bottom feed facility. Working in conjunction with its optional pull tractor Star feel that the combination will be useful for label printing.

On top of all this is the introduction of the LC-10 II. Same carriage width as its forbear but, again according to the manufacturer, with a significant increase in speed. The LC-10 will give you 144 characters per second in draft Elite and 36 cps in near letter quality. The newer version offers 180 cps in draft and 45 in NLO. We haven't had the chance to put these to the test ourselves.

Prices for the two printers are as follows: the LC-15 is £399 while the LC-10 II costs £229.

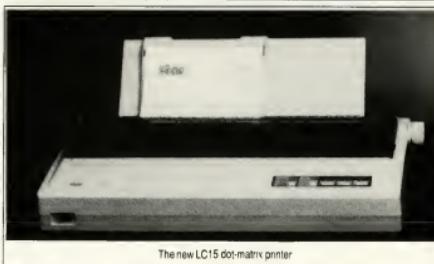
If you would like to contact the company you should phone them on: (01) 840-1800.

## Second opinion

Would you like to contribute your views to our reviews? We are going to be running a special desktop publishing feature in the very near future. We would very much like to hear from people with experience and knowledge of the following packages:

The Desktop Publisher, Fleet Street Editor Plus, Master Scan and Masterprint, the Trojan Lightpen and Newsdesk International. Please write to Second Opinion (DTP), 8000 Plus, 4 Queen Street, Bath, BA1 1EJ.

## Answer to Dingbyte: Lightpen



## SNIPPETS

### High ho silver away...

Have you had any dealings with a company called Disc Recovery Service - not to be confused with Dave's Disc Doctor Service? They are based at St Leonards road in Bradford and keep writing to us, to Locomotive, to everyone and their aunt. If you have, then Snippets would be curious to hear your opinions on the service(s) supplied.

### Atchoo!

Another book about computer viruses. Having never heard of a PCW suffering from the slightest ouch let alone a full blown virus we wondered why Price Waterhouse sent us a press release. Never the less, *The Complete Computer Virus Handbook* might be an interesting read if you are curious about such infections. Priced at £14.95 it is available from most bookshops.

### Draw pardner

We reviewed PCW Draw in the July 1989 issue and complained of the fact that you couldn't print the Zoom screen or edit Details. Well, apparently you can now. HTB computers have sent us a new version of the program which we hope to review when time and space allow.

### RAMming speed

We said in last month's review of the Isenstein's prototype RAM board that it would not run Microdesign. We were wrong and have been told as much by several readers, Creative Technology and Isenstein. It most certainly does run but makes no use of the extra RAM. Sorry about that, there must have been a problem with our (prototype) board.

### Words made simpler-er-er

The Electronics Handbook by Jorge de Sousa Pires came into the office this week. Here is a sample from the Etymology of Computerese section: 'Flexible' emanates from the lat flexus, from flectere to bend. A dog is said to have FLOPPY ears when they hang loosely. A FLOPPY disk(sic) is therefore a disk which can be bent, not rigid. So now you know!

"The Rolls Royce of PCW desk-top publishing"

Amstrad PCW magazine, July '89.

MICRO

Design

See us at the

COMPUTER  
SHOPPER  
SHOW '89

on STAND E4

TYPESETTING = GRAPHICS = FONT DESIGN = PAGE LAYOUT = TEXT EDITING = PRINTING

- Runs on PCW8256, PCW8512 and PCW9512.
- Fully compatible with files from Locoscript2, Protext, Wordstar, AMX Stop Press, The Desktop Publisher, Mini-Office Professional, Rombo Vidi Digitiser, Master Scan, and other PCW software packages.
- Gives very high quality printed output using the internal dot-matrix printer, or an external 9-pin, 24-pin or laser printer (AMX laserJet™ compatible).
- Supports both the Kempston and AMX mouse systems (though not essential).

(Recommended retail price £69.95)

**£59.95** Inc VAT  
and P+P

With **FREE** Extra Fonts disc  
only when ordered directly



from

10 Park Street  
Uttoxeter  
Staffs  
ST14 7AG  
0889-567160

**CREATIVE TECHNOLOGY**

## EXTRA FONTS DISC

**£14.95**

Inc VAT and P+P

**FREE**

with MicroDesign 2 when  
ordered directly from  
Creative Technology

A superb new disc full of fonts from the creators of MicroDesign  
including larger headline typefaces designed at sizes up to 75pt.

Baghdad Calligraphic CELTIC CURNEY MIBLICK  
Outrigger Schwabacher Sherwood ... & many more

This advert was designed, typeset and printed AT THIS SCALE using an Amstrad PCW8512, MicroDesign 2 and a Star LC10 9-pin printer.

## TOP QUALITY PRODUCTS AND RELIABLE SERVICE **GUARANTEED**

### DATA TROLLEY



Dimensions:  
Height 720mm  
Width 758mm  
Depth 584mm

Data Trolley £69.00  
Delivery £7.50  
per unit.

### PRINTER MUFFLER



80 Col Hood £69.00 Stand for 80 Col Hood £21.00

STOCKISTS OF ORIGINAL AND  
COMPATIBLE (and coloured) AMSTRAD  
PRINTER RIBBONS, DUSTCOVER SETS,  
COMPUTER CLEANING PRODUCTS,  
PRINTER STANDS AND MUCH MORE —  
ALL JUST A PHONE CALL AWAY!

### ANTI-GLARE FILTER



Designed specially for PCW8256/8512/9512 £13.00

### CF2 3" DISKETTES



Maxell (per box 10) £9.95 Amsoft (per box 10) £22.95

### 3" DISK STORAGE



Small 3" Storage Box (Cap 30) £9.95  
Large 3" Storage Box (Cap 50) lock £15.83

**Free**  
WRITE OR PHONE  
NOW  
FOR FULL COLOUR  
MAIL ORDER  
BROCHURE



Post  
Order Express Hotline on (0779 423523  
(10 lines, 24 hours) and order quoting  
credit card number, name, full postal  
address, daytime phone number and  
the card number below.

Post  
Simply for your order, name and  
address, enclose a cheque or postal  
order (made payable to "SBS  
Computer Supplies") or your credit  
card details to the full address below

### DELIVERY AND INSURANCE - UK MAINLAND

- 1 Supplied 1 item = £15.00 2 items = £20.30
- 2 Courier delivery only for computers, printers  
and furniture = £7.00 per unit
- 3 Overseas Orders Welcome — Please contact  
us for delivery information

**SBS**  
COMPUTER SUPPLIES

TO ORDER SIMPLY TOTAL  
YOUR PURCHASES, ADD  
DELIVERY CHARGE AND 15%  
VAT. ALL PRICES EXCLUDE  
VAT & DELIVERY E&OE

SBS COMPUTER SUPPLIES LTD. FREEPOST (BR332) DEPT. 311, PORTSLADE, BRIGHTON BN41 1ZZ



# NOTE PERFECT

After two years' work, the Composer's Pen is here. Now you can prepare music manuscripts in exactly the same way that you create LocoScript documents.

Rob Ainsley conducts the investigation...

## Mixing it

You can, as hinted here, use your PCW to control MIDI instruments such as synthesisers. See 8000 Plus August 1989, page 26. MIDI interfaces from EMR on 0702 353747 at £99.95 and software from them to mix down your music for £59.95.

## THE COMPOSER'S PEN

£75 (£30 pocket version) • Composit

Software • 021 456 1967

The PCW is not designed as a music machine. It can't make any nice noises – only a B flat beep (a slightly sharp B flat, to the annoyance of those with perfect pitch), a few clicks and whirrs in the disc drive, and that irritating high-pitched whine from the monitor. Perfect, maybe, for a Stockhausen oeuvre or a John Cage work, but not kind on the ear.

This is virtually insurmountable; you can use the PCW to control various musical instruments through interfaces, using it as a sophisticated mixing desk, but as ever in life, two semiconductors don't really make a conductor. You need to spend a lot of money – a hundred pounds for a MIDI interface and software. Perhaps even another couple of hundred pounds on synthesisers and those infernal electronic guitars.

But there's no reason why the PCW can't be used as a music processor to prepare, edit, store and print out musical notation in the same way as you use LocoScript to process your letters. At least, no good reason. There's a bad reason, which is that the machine is a dedicated word processor – like most of its owners. The screen was only ever meant to take characters, not musical notes.

Writing a program that lets you 'type' notes on screen and print them out just as you do with words demands a lot of clever programming and pushes the PCW into something it was never meant to do; it's like expecting James Joyce not only to dash off a few chapters of Ulysses, but to finish it off by singing a few Irish folk songs, accompanying himself on the guitar. (In fact, he was a fine tenor, but a rotten guitarist.)

After two years' work, this is just what Composit Software have done – produce a music manuscript program

for the PCW, aimed at professional musicians, students and teachers – anyone, in fact, who needs to produce musical copy.

## Homage a LocoScript

Right from the start (after a digitised opening picture of a stern Ludwig van Beethoven, evidently irritated by that slightly sharp B flat) there's a familiar look to things. The Composer's Pen has been modelled closely on LocoScript; so much so, in fact, that you can find your way through with only the occasional reference to the manual.

For example, the opening screen lists the files on the disc; you press C to create a new document, E to edit an existing file and P to print a file. There's also a bar across the top listing the effects of the function keys, just like LocoScript.

Creation of a new file is only possible if a 'template' exists on your data disc. This can be copied from the program disc and altered to suit the configuration you want – one stave or up to 99 linked ones, each named for the instrument. Any document you create starts off looking like the template, just as in LocoScript.

Editing a document first shows you the 'setup' – that is, how many staves there are and the names of instruments, just like the extreme left of an orchestral score. Pressing [F1] 'Music' shows the actual contents of the staves, notes, ties, bar lines, accidentals and all.

You scroll around using the cursors – up or down, right or left. There are 'quick moves' to let you jump around instead of scrolling, but otherwise this is where the first demonstration of how difficult it is to write a program like this appears: scrolling is very, very slow. This is one of the less desirable resemblances to LocoScript 1. However, it lumbers along fine, redrawing all the tied notes and rests

## 9512 note

The Composer's Pen not only works on the 8250 or 8512 printer but will also work with dot matrix printers on the 9512. You need one with Epson compatible graphic codes – which is most printers apart from some IBM types and Mac printers. If in any doubt check with your dealer before buying.

## J A R G O N B U S T E R

**Accidental** Not an unintended note, but one which is outside the key of the piece and therefore has something like a sharp, flat or natural sign in front of it

**Adagio** 'slowly'

**Bartók, Béla** Hungarian composer who wrote a lot of wacky pieces based on East European folk music, and the popular Concerto for Orchestra

**Beams** Notes joined together in groups with a straight line

**Beethoven, Ludwig van** German composer who took music from the Classical to the Romantic era and wrote nine of the most significant symphonies of all time

**Haydn, Franz Joseph** Austrian composer who wrote 104 symphonies, all a model of wit and skill, and all with strange nicknames such as the 'Miracle', the 'Clock', the 'Surprise' and the 'Razor Blade'

**MIDI** Musical Instrument Digital Interface - the system that lets computers handle music by representing notes as numbers

**Molto pesante** 'very heavily weighed down'

**Octave** The distance between two notes that sound the same but different - when men and women sing together, they usually do it an octave apart

and pauses and everything.

Entering notes is done via the keyboard using two sets of keys, one which controls the duration of the note, the direction of the stem and the octave, and the other of which sets the 'name' of the note. The QWERTSDF keys return ABCDEFG respectively, the + and - keys are used to increase or decrease the pitch of the note by an octave, and the [ and ] keys to increase or decrease the duration of the note (quaver to crotchet, crotchet to minims and so on). Other keys then add accidentals or dots. It's surprisingly easy to get used to and you quickly find yourself doing it unconsciously.

The CUT, PASTE and COPY keys work as they do in a word processor, letting you chop and change at will. To copy a section, you press COPY at the beginning, use the cursors to mark out your block, and PASTE it into the appropriate place. Recurring themes or parts can be copied and pasted around saving a lot of tedious rewriting - perhaps we'll see a revival of the Passacaglia as a musical form now? You can superimpose sections on top of other sections - useful for multi-line instruments where the number of parts played changes. This is quite a tricky manoeuvre but can lead to extremely impressive results, enabling multiple complex beamings and phrasings, and is the only way of coping with musical problems like guitar and piano writing where the number of parts per stave can change from bar to bar.

The ability the program shows in handling even the most complex musical layouts is staggering. You can handle rests, ties, complex tuplets, double sharps and flats, any old key signatures (including Bartók-esque oddities such as the one consisting solely of a C sharp) or time signatures and you can lay out musical parts for anything from a single instrument up to a large orchestra.

Like LocoScript, The Composer's Pen is menu-based. You make selections from menus using [+] and [-] and pressing [RETURN] or [ENTER] effects the choice while [CAN] abandons the menu and returns you to where you were.

### The key facts

Multi-line or transposing instruments are no problem; you can automatically transpose lines from any key to any other at the touch of the [f6] key. This is an incredible time saver - ask anyone who's ever had to write out a tune in C sharp minor for an E flat clarinet! You just press [f6] and mark out the block you want to transpose (you can only do it on one instrument at a time). Specify up or down and the key you want it to go into, and hey presto - or rather, hey andante sostenuto - the part is steadily redrawn in the new key, all accidentals and so on correctly transposed.

Most of the features (notes and chords, beams, rests, accidentals, bar lines and so on) show on screen as they will print out except for phrase marks which show as straight lines (they print out alright though). Compositions can be

**Orchestrator** write out parts for the various orchestral instruments for a tune in such a way as to make sense. Shostakovich once orchestrated 'Tea for Two' in 45 minutes for a bet

**Passacaglia** Piece of music with the same bass 'riff' repeating over and over again while the top lines ramble on

**Sempre moderato** 'always moderately fast'

**Sonata** musical work for one instrument, possibly accompanied by piano, and the name given to a musical form that people have written PhDs on

**Steve** Those five lines that you write music onto

**Stockhausen, Karlheinz** Avant-garde composer who writes strange music full of beeps, scratches, pops and whistles, and gave rise to the quip 'Stockhausen? I've never heard any, but I've trodden in some!'

**Transpose** Change a line of music from one key to another, the equivalent of translating a phrase from one language to another

**Triplets** A group of notes played in a different beat to the rest. In Ravel's Bolero (tum-ta-tum ta-ta-tum tum-tum) the 'ta-ta-ta' is a triplet, three notes played in the time of one



## Second opinion

Felicity Rich (Felix to her friends) is studying at the Royal Academy of Music. She's just finished a music degree at The Queen's College, Oxford, where she also conducted the Oxford Philharmonic, and organised various jazzbands. She's also the owner of a PCW8512, making her the ideal person to give a 'professional's view'...

### How useful is it?

Brilliant - very useful, once you've got used to it. It's as quick as writing stuff out by hand, a lot neater, and a lot easier to change things. I'm always having to write out arrangements - for ensemble work, or the jazz band, when the trumpet player

doesn't turn up, for example - and here the transpose facility is really useful.

### Was there anything it couldn't cope with?

Not really. If you're doing really wacky modern music, Lutoslawski or something, you couldn't have some of the more squiggly stuff, but you could easily add it by hand afterwards. But it's got everything else.

### How easy did you find it to use?

Very easy to learn. The only thing is, it can be a bit slow with big stuff in it. It's so much like LocoScript, I was using it after two minutes, and just referring to the manual when I got stuck. It took a bit of time to find out how to cut a single note, but that's probably my fault for not reading the manual!

### How good is the printout?

The printed quality is quite good, certainly good enough. Some of the semiquavers go a bit square and blocky, and it's a bit different from standard musical handwriting, but it's perfectly readable. If you put it in front of the BBCSO at the Proms they'd moan a bit, but it would be quite readable.

### The crucial question - would you recommend it to your friends?

Oh yes, definitely! It's good fun playing about with it as well. The main thing is, having music that you can alter is such a major step. Writing out music takes hours and hours. Miss a bar out and it's drastic - you have to rewrite a whole page, whereas with this, you just stick in the extra bit in and it reformats the piece for you, numbering the bars too. It's a bit slow but it saves a lot of time.

saved to disc, copied and erased as normal. Text can be put in more or less anywhere, for directions or song lyrics. Words can be typed in under staves, for example, or just above them for where you want to specify 'sempre moderato' or 'adagio' or whatever.

Printing can be done either condensed (fine for multi-part compositions) or normally (for single instruments) in draft quality or bold (which uses two passes of the print head). You just select 'P' from the disc manager screen and

## Gives me that buzz

You can, by dint of certain arcane BASIC-like codes, make the PCW bumble buzz almost recognisable tunes. An example appears on the disc that comes with the 8000 Tips Collection (advertised in the Special Offers pages) called JINGISM.BAS.

## And with a bit of swing, too

Perhaps the longest direction at the top of any well-known piece of music is that heading the first *Promenade* from Musorgsky's *Pictures from an Exhibition*. It says Allegro giusto, nel modo russo, senza allegrezza, ma poco sostenuto.

## Cheapskates corner

While you're saving up to buy 'The Composer's Pen' you can print out musical staves on paper in LocoScript. Just select half line spacing with (+LS1/2) and use [EXTRA]Zs to make the vertical lines, with (+UL)(-RA)(-UL) for the horizontal ones.



The opening screen with a bemused Beethoven. Will he hear the beep to remind him to turn over the disc while loading?

Title: Smells For Cellist Top 8000 Plus

File Layout Text Edit Alt+Alt J=JLG Help Insert F1/F2/F3 F4/F5 F6/F7 F8/F9 F10/F11

Key Signs



You can quickly enter your own musical lines – even transpose them automatically



The guitar sonata printed out in normal size draft



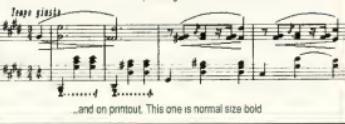
Beethoven's fateful Symphony No. 5 shows how orchestral parts can be linked



...and on printout. This is in condensed bold



Chopin's Waltz in C minor on screen shows off a bit of complex phrasing...



...and on printout. This one is normal size bold

specify the bars or instruments you want printed out. Rather oddly, the document appears on screen in chunks at the size it will print out and then the PCW appears to dump this image to the printer. Printing is not fast – a whole page of orchestral parts in condensed bold takes five or six minutes – but is acceptable. Draft normal size takes only a minute or so for a page.

The print quality is very good and perfectly acceptable for professional use (though it's not publishing quality). You can also select just specific bars or instruments to be printed.

The cost of having music 'typeset' is so great – several hundred pounds for a small orchestral piece – that this program could save the musician, whether professional composer or teacher writing out parts for the school orchestra, a lot of money.

The only problem with the program is that (like its molto pesante model, LocoScript) it can be slow, especially with large compositions. Reformating a piece (which is done with the obvious RELAY key) after altering a note or two can take several seconds. Many will find it easier to compose music in the usual way, with a piano keyboard rather than a PCW's, and then set the music onto disc once the rough shape is decided.

But it would be unfair to harp on the speed too much – after all, it's remarkable that the thing can be made to work on a PCW at all. Like the Haydn symphony, it's a miracle it got written in the first place. And then how much time it saves, and how impressive the results are!

The 'pocket' version lacks a few versions of the full version – complex tuplets and beamings, transposition and so on – but is perfectly adequate for music up to, say, GCSE standard.

The program comes with a very good tutorial and separate reference manual ringbound to open out flat, a quick reference card, and several example files. It has been clearly written with the same amount of thought and care as the program design. Everything is clear and explained in jargon-free English, and there's a good index. This sets an example to many 'professional' technical writers.

## Finale

An excellent program that has pushed the PCW into an area it was never designed for. It's easy to use, well designed and you'd be hard pushed to think of music it can't handle – all at a very reasonable price.

It's not fast, but then neither is LocoScript, and that hasn't stopped people writing novels with it. The Composer's Pen is essential for any PCW owners who need to produce musical copy – teachers, students and musicians of all kinds. The pocket version would be an ideal educational tool for anyone starting a GCSE or A-level course who has access to a PCW too.

**When ordering you have to specify which PCW you have as the printer drivers are different in the 8000 and 9000 versions.**

## THE COMPOSER'S PEN

### PLUSES

- ▲ Good printed quality
- ▲ Easy to use
- ▲ Very powerful - handles any effect
- ▲ Transposes from any key to any key
- ▲ Cut, copy and paste sections
- ▲ Ideal educational tool
- ▲ Good manual

### MINUSES

- ▼ Slow in use

**RANGE OF FEATURES** 5/5 **EASE OF USE** 4/5

**PERFORMANCE** 4/5 **DOCUMENTATION** 5/5

**8000 PLUS VALUE VERDICT** 5/5

## PAPER

### LOOK AT OUR RANGE!

All prices per 1000 sheets incl. VAT	
11/9 5 60gsm Listing.....	£6.45 + P&P
11/9 5 70gsm Microperf.....	£7.95 + P&P
11/9 5 85gsm Letter Qua.....	£9.95 + P&P
A4 size 70gsm Microperf.....	£9.70 + P&P
A4 size 85gsm Letter Qua.....	£10.95 + P&P
<b>A5 size Letter Quality paper,</b>	
Upright (Portrait) Orientation,	
Microperf all edges for letter-writing.....	£13.90 + P&P

### Address Labels

3.5/1.5, 1- or 2- across £3.75 per 1000  
+£2.50 P&P (any size order)

### ENVELOPES

	500	1000
3.5/6 Manilla gummed.....	£3.95	£6.95
DL White self.....	£8.95	£16.95
DL White self-seal + window.....	£10.95	£19.95

Please add £2.50 P&P for paper/label/envelope orders

## "10-in-a-box"

Smart, lockable disk bank  
with 10 CF-2 disks . . .

£29.95

inc. VAT & post



(Box holds 20+ disks)

\*Box on its own £9.95 incl.

## DUST COVERS

PROTECT YOUR EQUIPMENT!

PCW 8256/8512 set £11.95

PCW 9512 set £13.95



STAY COOL -  
FOLLOW THE  
HARE!

## SOFTWARE

ALL SOFTWARE PRICES INCLUDE VAT & POST

### W/PROCESSING

Product	RRP	Ours
Locofile 2* .....	29.95	26.95
Locofile 2+ .....	29.95	26.95
Locofiles 2 .....	24.95	22.00
Locoscript 2 .....	19.95	19.95
Locoscript 2 .....	19.95	19.95
Locoscript 2 + U/Spell .....	34.90	32.95
Protect .....	59.95	44.95
Pocket Protect .....	39.95	28.95
SuperType 2 .....	19.95	18.95

### DESKTOP PUBLISHING

Stop Press .....	49.95	39.95
SPress + Mouse .....	89.99	79.95
Design Publisher .....	29.95	22.00
DTT + Mouse .....	79.95	64.95
Fleet Street Editor .....	49.95	39.95

### ACCOUNTS

Digital Business Cont .....	89.95	79.95
Digital Tax Planner .....	24.90	21.95
Comix Simple Accounts 2 .....	99.95	79.95
MAP Integrated Accounts .....	143.75	109.95
MAP Payroll .....	69.00	49.95
MAP Individual Ledgers) .....	49.95	39.95
MAP Stock Control .....	69.95	49.95
Money Manager + .....	39.95	29.95
Sage Pop Accounts .....	99.95	74.95
Sage Accounts Plus .....	149.50	109.95
Sage Pop Payroll .....	70.15	54.95
Sage Pop Invoice .....	70.15	54.95

### DATABASES

Product	RRP	Ours
Atlast Plus .....	39.95	29.95
First Base .....	29.95	27.95
Comix Card Index .....	34.95	29.95
Masterfile Reference .....	39.95	36.95
Sage Reference .....	70.15	49.95

### SPREADSHEETS

Product	RRP	Ours
Finnt Calc .....	28.95	27.95
Cracker 2 .....	49.00	36.95
SuperCalc .....	49.95	39.95

### UTILITIES/GENERAL

Product	RRP	Ours
Amor Mexican 2 .....	49.95	39.95
Amor C .....	49.95	39.95
Comix Job Estimator .....	79.90	69.95
Comix Product Costing .....	79.90	69.95
Knife .....	19.95	18.95
Page II .....	19.95	18.95
Stockmarket .....	19.95	16.95
Typewriter .....	17.95	16.95

### LEISURE

Product	RRP	Ours
Tomahawk .....	19.95	16.95
Colossus Bridge .....	15.95	12.95
Colossus Chess .....	15.95	12.95
Mitchday 2 .....	14.95	11.95
Scrabble .....	19.95	16.95
Time and Magik .....	14.95	12.95

\*please state B256/8512 or 9512

## RIBBONS

THE WIDEST RANGE  
All include VAT & post free-

**PCW 8256/8512**

1 off

2 off

5 off

Black High Quality fabric .....

£3.95

£7.45

£16.95

Black ExtraLife .....

£4.95

£8.95

£19.95

Colours\* .....

£4.95

£8.95

£19.95

Multistrike Films .....

£3.95

£7.45

£16.95

**PCW 9512**

1 off

2 off

5 off

Multistrike films .....

£3.95

£7.45

£16.95

Fabric Black .....

£3.95

£7.45

£16.95

Fabric Black ExtraLife .....

£4.95

£8.95

£19.95

Fabric Colours\* .....

£4.95

£8.95

£19.95

Lifetimes: M/Strike 100 000 Characters

Fabrics 400 000 Characters

ExtraLife 750 000 Characters

Fabrics offer longer life and may be used with Refresh!

Mix 'n' Match: any 5 @ £3.95 for £16.95

any 5 @ £4.95 for £19.95

\*Colours available: Red, Blue, Green, Brown

## THE BEST OF THE PCW DATABASES

Upwardly compatible with ATLAST PC

*Special Promotion*

*Special Promotion* only £29.95

## 9512 DAISYWHEELS

Courier 10

Prestige Pica 10

Gothic 10/12

Rector 10

Recta 10

Script 12

Thesis PS

£6.95 ea

inc VAT & post

At last - a *unique*

new ink spray that

restores ribbons in

seconds

## SAVE £££s ON RIBBONS

• Quick & Convenient.

• Restores & Re-inks faded ribbons

in seconds!

• Refreshed ribbon lubricates print

head for smoother running &

enhanced printer life.

• Use on **any** fabric ribbon...

again and again!

• Pays for itself the first two times

you use it.

ONLY

£8.95

inc VAT & post

Checkes/PoS (no stamp needed)

**CASPELL COMPUTER SERVICES**

Dept. Bk, FREEPOST, Poole Dorset BH15 1BR

Tel: 0202 666155 or 0202 35650 (24-hr)

TRADE ENQUIRIES & LOCAL AUTHORITY ORDERS WELCOME

## HEAD CLEANERS

Improve the performance of your drive

~~£9.95~~ Only £6.95

# EVERY WHICH WAY

Under CP/M the PCW is set up the way you're most likely to want to use it, but it can be made to work very differently

**A**s you get out of bed in the morning, reaching over to turn on your PCW while looking for a clean pair of socks, have you ever stopped to wonder how it knows what to do? Unlike you the PCW is never confused as to where the printer is, or how to get characters in front of the keyboard. This is a wonderful arrangement right up until you suddenly feel a desire to do things differently, like getting characters in from the RS232 interface for example, or sending screen output to your new laser printer.

In fact there is quite a lot of confusion concerning the best way to deal with the PCW do things differently from the way it chooses to do them when first turned on. This is largely caused by a lack of understanding of the way CP/M itself sees the computer. So this month we're going to try and see things from the PCW's point of view and then, hopefully, persuade it to change its ways.

All computer operating systems have to have some way of dealing with the various bits and pieces of hardware (and software) to which they find themselves attached. In the case of the PCW the CP/M operating system thinks in terms of **devices** (this is in contrast to some operating systems that see everything as a file – even printers and keyboards).

CP/M divides devices into two categories, **logical devices** and **physical devices**. This is best explained thus: a physical device is something you can actually drop on your toes while a logical device is something you have to imagine dropping on your toes. This latter occupation is a good exercise for trainee Buddhists.

Since it is relatively easy to identify the physical device that just hit your toe we'll work on logical devices first. In effect

these are channels that CP/M can use to communicate with the world. There are five logical devices supported by CP/M on the PCW (though there might be more or less on other CP/M systems depending on the whims of the company who implemented it).

## It's perfectly logical

These five logical devices are the same for all PCWs and are shown in the box. Physical devices are actually attached to the computer and assigned to a logical device using the **DEVICE.COM** utility. To see the current assignments just type **DEVICE** without any parameters (**DEVICE** is on side 3 of the system discs for 8000 owners or the CP/M disc for 9512 owners).

Once invoked, **DEVICE** offers to let you change the assignments, so you could, for example, assign the printer (physical device **LPT**) the logical device **CONOUT**: everything you type then appears on the printer rather than the screen. If you fancy a taste of the way it was in the days of teletype terminals try this line:

**DEVICE CONOUT=LPT**

and to switch it back again:

**DEVICE CONOUT=CRT**

Much more useful would be assigning the logical device **LST**: to the screen to check that a page will look right when it prints out. You can have more than one logical device attached to a physical device and vice versa. This would be done thus:

**DEVICE LST=PAR**

If you just type **DEVICE** with no parameters you will see that **LST**: and **CONOUT**: are assigned to **CRT**. In fact you'll see it on screen and on the printer.

## XON going serial

The most likely reasons for you to be looking at **DEVICE** are because you have an interface fitted or (for 9512 owners) a new printer attached to the built-in Centronics port. Under CP/M 9512 owners need to send printer output to the physical device **PAR** (the built-in Centronics port) with the line:

**DEVICE LST=PAR**

while for both 8000 and 9512 owners the command to send printer output to the Centronics port of any interface that might be fitted is:

**DEVICE LST=CEN**

If you've been unfortunate enough to inherit a nice old serial printer (it seems unlikely you'd choose to buy one) then there are other things you need to do. Serial devices of all kinds have to know more since, unlike the Centronics interface, RS232 interfaces can be configured in all manner of different ways. Usually the **DEVICE** utility can do enough to get a serial printer going. It can set the serial port to a particular speed and ensure that the XON protocol is being observed.

## Logical devices

These are the same for all PCWs and the name includes the semi-colon. The names reflect the intended use though they are also important as an indicator of the direction data will travel when they're used. However, you can assign a logical device to an unsuitable physical device.

### CONIN:

This is short for Console Input and would normally be the keyboard. It is always an input device.

### CONOUT:

This is short for Console Output and would normally be the screen. It is an output device.

### AUXIN:

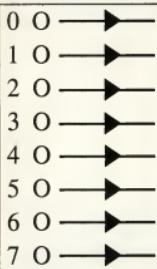
This is short for Auxiliary Input and is intended to be used with something connected to the expansion bus at the back of the PCW.

### AUXOUT:

Short for Auxiliary Out and intended for sending data to the expansion bus.

### LST:

As you might guess this is a logical device that would normally be connected to the List device, or printer and is for output only. It is often re-assigned to the screen.



A parallel (Centronics) interface can send a complete byte in one go.

St	0	1	2	3	4	5	6	P	Sp
	0	0	0	0	0	0	0	0	0

Sp = Stop P = Parity St = Start

A serial link has to send data sequentially and package it properly as well.

```
Device
Physical Device:
  L:input,0:output,S:Serial,X:Xon-Xoff
  CRT  NONE 10  LPT  NONE 0  PAR  NONE 0  SIO  9600  IOS
  CEN  NONE 0

Current Assignments:
  CONIN: = CRT
  CONOUT: = CRT
  MONIN: = SIO
  MONOUT: = SIO
  LST: = LPT
```

Enter new assignment or hit RETURN

To discover the current logical to physical assignments just type DEVICE with no parameters. Couldn't be more easy.

```
Device lst:;cpen
Physical Devices:
  L:input,0:output,S:Serial,X:Xon-Xoff
  CRT  NONE 10  LPT  NONE 0  PAR  NONE 0  SIO  9600  IOS
  CEN  NONE 0

Current Assignments:
  CONIN: = CRT
  CONOUT: = CRT
  MONIN: = SIO
  MONOUT: = SIO
  LST: = CEN
```

To set an assignment - like sending printer output via the interface - type DEVICE [LOGICAL DEVICE]-[Physical Device]

```
SetSio
  9600 Bits 8 Stop 1 Parity none Xon off Handshake on Interrupt off
  M)setsio 1200 Bits 7 parity even xon on
  1200 Bits 7 Stop 1 Parity even Xon on Handshake on Interrupt off
  M)I
```

Like DEVICE the utility SETSIO can either show you the current settings or alter them using the parameters you provide.

The XON protocol is simple enough to understand. All it means is that the serial device to which you're sending information and the PCW will work things out between them. The PCW won't send any information unless the serial device says that it's ready to receive it. This is clearly a good idea. Let's assume that the printer communicates at 1200 baud. Then the command to send printer output to a serial printer via an interface would be:

DEVICE LST:=SIO [XON,1200]

As you can see using DEVICE to re-allocate physical devices to logical devices is perfectly straightforward but it's probably worth going a bit deeper into the way the Centronics RS232 interface works.

The utility specifically designed to set up the interface on the PCW is SETSIO.COM, one of those programs that has a nasty tendency to strike fear into the average user's heart.

## Physical devices

There are differences in the physical devices between the 9512 and the 8000 series machines. The DEVICE program will only respond to the physical devices it knows about, and these are dependent on the implementation (which means it has to be decided for each different kind of CP/M machine made).

### CRT

This is the keyboard and the monitor; depending on which logical device is assigned to it, data is either read from it or sent to it.

### LPT

This is the printer; in the case of the PCWs it is always the built-in printer. On other CP/M systems it can be any listing device.

### PAR

This is the built-in Centronics port (on the 9512 only). This was a proprietary parallel interface designed by the Centronics printer company and now universally-used for parallel type printers.

### CEN

On the PCWs this is the Centronics port on the RS232/Centronics interface that attaches to the expansion bus at the back.

### SIO

This is the RS232 serial port on the same interface.

### NUL

Just to confuse matters completely this is an entirely imaginary physical device. Anything sent to it from any logical device is simply thrown away.

When working with modems or other serial devices – and especially if you're sending data between two computers using the RS232 port – it can happen that you need to set the interface to work differently from the defaults.

To explain what's going on when you use SETSIO, it's best to look at how serial links work. Unlike a parallel link (Centronics for example) which sends an entire byte at a time, a serial link sends only one bit at a time.

So that the receiving end knows what it's actually receiving, the bits have to be parcelled up. The other problem is checking that the right bits have arrived. Serial links work over longer lines but there is also more risk of corruption so a simple error check can be included.

The items that can be set by SETSIO are the transmitting and receiving speeds (TX and RX), the number of data bits (5, 6, 7 or 8), the number of stop bits (1 or 2), parity (odd, even or none), handshakeing (on or off) and XON (on or off).

If you're using XON protocols then you must be sending ASCII data using seven bit words. This is because XON uses the control characters Control-Q (17) and Control-S (19) which are sent with the data. If you were sending binary code these numbers could easily appear with the data stream.

If you're sending binary code between two computers (using eight data bits) then you probably need Handshaking ON. This is a separate signal that goes via different wires from those used by the data.

XON is an interesting idea. How it works is that one of the bits sent is used as a checksum. If all the data bits set are counted there will be either an odd or even number of them. If parity is set to even then the parity bit will be set if the data bits add up to an even number and vice versa.

SETSIO is a PCW specific utility, other CP/M systems will have their own purpose written utilities to do the job. This is always the case since the way serial ports are implemented depends on the computer manufacturer and has little to do with CP/M itself.

However, it is important to know how to set the PCW up properly if you hope to persuade it to talk to a serial device. Remember, CP/M only knows about logical devices, which is where we came in.

### Put it there

The PUT utility is another one that can come in handy for altering the way the PCW works. Run PUT and it asks you for a file name. All screen output from the new program you run is then sent to this file until the program terminates. At this point the file is closed. The resulting file is pure ASCII and can be merged into any word processor document – this is handy when using spreadsheets like SuperCalc.

# PUBLISH AND BE DAMNED - pleased

There has never been a better time to invest in a Page Processor

IF ONE PICTURE IS WORTH A THOUSAND WORDS  
THINK WHAT YOU CAN SAY WITH



Read what the Reviewers have to say

*"New lease of life for the PCW"*

**THE MANUAL** "is clear, concise and refrains from using terms which might confuse the first time user". "Comprehensive, immensely friendly and will lead you where you want to go". "An excellent manual...which contains a clear and well-set-out tutorial guide, as well as a full reference section".

**USE** "It takes about an hour or so to get on speaking terms with MicroDesign". "The most un-artististic user should be able to produce basic illustrations." MicroDesign has been created with the end user in mind. "The program is meant for grassroots users."

**FEATURES** "It does everything you are likely to need in designing and laying out your artwork. Every document can be made to look attractive". An important feature of the program is auto-flow around graphics... the text you enter will automatically flow around the picture. "The impressive way it copes with text". "There's speed like you wouldn't believe possible from the PCW". "Very fast - puts rivals to shame". "(They) have thought of everything."

THE THERE HAS NEVER BEEN A BETTER TIME TO  
INVEST IN A DOT MATRIX PRINTER

## 9 and 24 PIN DOT MATRIX PRINTERS

We have researched budget printers for you and STAR is the outright winner with Panasonic the only close contender. We rejected Amstrad, Brother, Citizen, Epson (reliability) and NEC (jamming). The STAR LC-10 was voted 'Best Dot Matrix Printer' by What Micro and 8000 Plus. The Star LC24-10 was chosen by the PC Independent Users Club and PC Plus.

- \* STAR LC-10 Multifont 9 pin 144cps draft, 36cps NLQ (£135+) = £155.25
- \* STAR LC-10 Colour (7 colours including black) 144cps/36cps  
Fully compatible with MicroDesign II. .... (£173+) = £198.95
- \* STAR LC24-10 Super 24 pin 170cps/57cps LO ..... (£197+) = £266.55
- \* STAR LC24-15 takes A3 landscape, 200cps draft,  
67cps LO ..... (£330+) = £379.50

STAR LC24-10 and LC24-15 ..... (£365.00+) = £405.00 will require an interface and will usually require LocoScript 2. All PCW's will require Printer Drivers to run LocoScript 2 (Booklet available on request). Please note that Panasonic's otherwise excellent KX-P1124 requires the extra 32K RAM Card Text Buffer for even part compatibility with LocoScript 2.

## PERIPHERALS AND ACCESSORIES

**PRINTER CABLES.** Top Quality PCW9512 to Star etc (Centronics) £7.95  
PCW 8256/8512 (Interface required) to Star etc Centronics Printer £9.95

**Extension cables.** 8256/8512 1 metre, 9512 2 metres ..... £11.95

**RIBBONS** (including VAT, P.P.) ..... LC-10 £4.60; 5+ £4.30  
LC-10 colour £6.90; 5+ £6.20, LC-10C also takes black  
ribbon for economy: LC24-10/LC24-15 ..... £5.75; 5+ £5.25

**Auto Load Cut Sheet Feeder** LC-10, LC-10C, LC24-10, LC24-15 ..... £69.00  
**BBB Dust Covers** (including VAT, P.P.) 8256/8512 (grey 3pc) ..... £11.45;  
9512 (ivory) £13.45. Star LC-10, LC-10 Colour, LC24-10, LC24-15 ..... £5.50  
(state grey or ivory)

**INTERFACES** Parallel serial for PCW8256/8512 printer etc connection  
SCA Professional. Highly regarded, full featured ..... (£40.87+) = £47  
SCA Professional Plus. As above - real time clock/clock ..... (£50+) = £57.95

**MASTER SCAN** Optical scanner attaches to 8256/8512  
printer head. Digitises most pictures to save for Graphics  
and DTP programs ..... (£46.04+) = £52.95

**MASTER PAINT** Graphics package £13.95....With AMX MOUSE ..... £55.95  
**MASTER PACK** Master Scan + Paint £58.95....With AMX MOUSE ..... £99.95

**AMX MOUSE** Includes interface with through connector.  
'Best' 8000 Plus ..... £44.50

**CANON PHOTOCOPIERS**

Price includes one year UK on site maintenance

Canon FC-5 small portable multiple A4 copier ..... (£575+) = £661.25

Canon PC-7 8 copies/min Reduction/Enlargement ..... (£850+) = £977.50

**PRINTING** "The print quality, even from the PCW printer, knocks spots off the competition." "Output is extraordinarily good" ...found it hard to believe. The quality was far in excess of my hopes" "...the high graphics resolution produces highly quality text even from the standard printer." "...extremely high resolution printouts which set the software apart from its competition".

**STOP PRESS** "MicroDesign II takes over where Stop Press leaves off. There is no chance of Stop Press being upgraded to compete with MicroDesign II now and in fact there would be little point, there is just so much ground to make up...it would make little sense to choose Stop Press. MicroDesign II would win out for the printer support alone."

**THE ACCOLADES** "They have introduced a desktop publishing program with surprising ease of use, great design and a wealth of text and graphic manipulation for the ubiquitous PCW" "Does almost everything better." "This beats the lot". "The results are superb." "Brilliant and sophisticated." "Beats the opposition hands down." "The Rolls Royce of PCW desk-top publishing."

**QUOTATIONS FROM:** The Guardian; 8000 Plus; Amstrad PCW; Micro Computer Mart; N.C.E.

### TYPESETTING \* TEXT EDITING \* PAGE LAYOUT

**TYPESETTER** "PCW9512 and DESKTOP PUBLISHING"

Runs on the PCW8256, PCW9512 and the PCW9512. Fully compatible with files from LocoScript 2, Protostar, Wordstar, AMX Stop Press, The Desktop Publisher, Mini-Office Professional, Rombo Vidi Digitiser, Master Scan and other PCW software packages.

Gives high quality printed output using the PCW 8256/8512 dot matrix printer. Speed and resolution are improved using an external 8 pin printer. High resolution and speed are achieved using a 24 pin, or laser printer. MicroDesign II also supports the Star LC-103 Colour Printer. Supports both the AMX and Kempston mouse systems.

Huge range of Fonts, Typestyles and Typesetting functions. Extensive range of Graphic Art and Design facilities.

### MICRODESIGN II (£36.52 + VAT)

With AMX Mouse and Interface (£7.130 + VAT) = £82.00  
We will beat any lower price providing the advertiser has stocks

**£42**

### YOUR PCW 8256 WILL NEED A MEMORY UPGRADE FOR HIGH RESOLUTION PRINTING

## MEMORY UPGRADES

Upgrade your PCW 8256 memory to 512K with our best selling kit. Almost an essential for MicroDesign II and LocoScript 2

Our simple instructions assume no prior knowledge, experience, or skills. We supply TOP QUALITY chips which are jig performed for ease of insertion. NQ BEND REQUIRED, plus a 'Practice' chip. Simply 'Plug in & Go'!

\* PCW 8256 256K Memory Upgrade kit to 512K ..... (£34.74+) = £39.95

### SAVE £5 ON ABOVE WHEN PURCHASING 3" DRIVE

## PCW DRIVES

3" Brand New AMSTRAD PCW9512 and PANASONIC internal 31mb (720K formatted) drives using C1600 diskette suitable for PCW 8256/9512. Drive comes in & Go" NB BEND REQUIRED, plus a 'Practice' chip. Simply 'Plug in & Go'

\* FD4 second drive for PCW 8256 and PCW 9512 ..... (£107.87+) = £124

\* FD2 second drive for PCW 8256 (as available) ..... (£112.17+) = £129

\* NEW FD1 for PCW 8256/8512 drive A replacement ..... (£86.09+) = £99

\* NEW FD4 for PCW 9512 drive A replacement ..... (£103.48+) = £119

## SOFTWARE

**LOCOMOTIVE SOFTWARE.** All new stock. Prices include VAT

### For the PCW 8256/8512

Printer Drivers Disc ..... £17.95  
(+CharDisk) ..... £17.95

24 Pin Printer Drivers ..... £22.95  
LocoMail ..... £16.95

LocoFont 1 ..... £13.50  
LocoFont 2 ..... £13.50

LocoFile ..... £23.95

**For the PCW 9512**

Printer Drivers Disc ..... £17.95  
(+CharDisk) ..... £17.95

24 Pin Printer Drivers ..... £22.95  
LocoFile ..... £23.95

For all PCW's: LocoFont 24 Text £23.50, LocoFont 24 Display £23.50

**CAVALIER SOFTWARE**

HOTELERS! Hotel £89.95; with Hotel Plus £134.95; Diner £94.55; Intact £67.50

Minimum order £10. Next day Courier Delivery £8

**Bold prices include VAT and UK post, normally by return.**

**Send cheques/Money orders, or Pic/LA Govt orders to:**

**SILICON CITY**

Dept 8, Wheal Rose, Redruth,  
Cornwall TR16 5DR

**Access/Visa orders: Telephone 0209 881141**

(Coochance Ltd)

**Fly Sheets --Font Designer--Leaflets--Letterheads--Magazines--Manuals--Maps--Menus--**

# THREE'S COMPANY

Pep up your PCW by adding an additional 5 1/4 inch drive.

John Hellis shows you how



Yes, even an 8512 PCW can now have a 5 1/4 inch disc drive.

one disc and one and a half year's worth of accounts on another. The work involved in re-entering the accounts alone would nearly pay for the new drive.

The drive I purchased is a standard low 80 track, double sided, 5 1/4 inch drive. The only difference between it and others available was the 3 inch to 5 1/4 inch selector switch. This is located on the front just beneath the disc slot rather than the rear. The only problem with this is the fact that the switching functions are not marked.

Leading from the back are two cables: the first is the mains supply. This is essential as the PCW power supply is not able to handle much in the way of external devices. The second is the familiar grey ribbon cable, similar to the printer cable on the PCW, the difference being that the new one has male and female connectors/sockets fitted at each end.

## Instructions supplied

The instructions supplied with the unit are very clear and simple. Firstly, an area must be cleared on a suitable flat surface. Using a thick piece of cloth to protect the screen of the PCW place the machine face down and remove the four screws holding the case together. Amstrad have thoughtfully indicated the screws with small arrows. Gently lever the case apart.

Now comes the tricky part. You must identify the ribbon cable which runs from the main computer board to the lower drive. Disconnect this from that drive. Re-connect it to the cable from the 5 1/4 inch drive. Now fit the second connector on this cable to the internal drive. Carefully re-assemble the case and fit the screws. The ribbon cable with the external drive is short so you should take care when turning the PCW right way up.

The final thing to do is to test your upgraded system. Power up the new drive and your PCW. Make sure that the selector switch is set to 5 1/4 inch. Insert a disc into the new drive. Then put your start of day disc into the A: drive. The computer should boot as normal. The message on the screen should still show two drives fitted. If the computer does not boot or the new drive is not recognised remove the discs and switch off immediately. Check the cables and the switch and retry.

In use the drive is seen by software as the internal 3 inch one. For example, you can format discs using Discikit as normal. If you wish to copy data from the 3 inch to the 5 1/4 inch or vice versa all you have to do is use PIP, DISCKIT or LOCOSCRIPT 2 as normal. Select the 'disc in B' by use of the switch on the drive. If you are going to copy data from 5 1/4 inch to 5 1/4 inch simply transfer the files to the M drive then switch over discs and transfer 'back'.

*I purchased my PCW some three years ago to maintain - among other things - a database of British pillboxes (the armoured fortifications, not the hat!). KDS Electronics, who supplied the drive featured above, can be contacted at 15 Hill Street, Hunstanton, Norfolk PE36 5BS on 0485 32076.*

**W**hen my collection of 3 inch discs reached the fifty mark I decided it was time to look for an alternative drive for my 8512. I did not want to lose my 3 inch B: drive so I made enquiries about adding a C drive. I would have liked a hard disc but couldn't afford a second mortgage. Then someone suggested KDS, a firm advertising a 5 1/4 inch drive as a switchable option for the PCW. Because the discs for this type of drive are far cheaper to buy it seemed just the thing for me.

In order to cut down on the number of discs, I had recklessly decided not to keep backup copies of my data. This resulted in the loss of some letters on



The first thing you will need is a 5 1/4 inch disc drive. The drive itself is quite standard but the cables and switches aren't so easy to find off the shelf.



You need to carefully remove the back of the machine while resting it on a padded surface. This exposes the cables attached to the disc drive.



Attaching the third drive is a simple matter of disconnecting the original cables and fitting those provided by KDS. Now re-assemble and enjoy cheaper discs.

# PC OF THE ACTION

Ben Taylor gets a sneak preview of the much-rumoured LocoScript for the PC

## The horse's mouth

The Locomotive team are pretty excited about the opportunities of the PC market, and have determined that LocoScript PC will succeed. Remember these quotes at the back:

"The lack of fire and hearing that the only thing wrong with LocoScript is its speed. We're going to make sure that isn't a problem with LocoScript PC." — Chris Hall, Director.

"LocoScript PC will run on anything from a single floppy drive mono screen PC1512 up to the fastest 386 model." — Howard Fisher, Marketing Manager.

"You can get a pretty good idea of how well designed a word processor is by measuring the time spent from opening a box to getting a sign out on your printer. Not a f or a \$, but a real, English £." — Richard Clayton, LocoScript PC Project Leader.

## Popular vote

Next time a PC bull curl's its lip and says to you, "LocoScript on a PC? What's a PC word processor?" tell them the facts. LocoScript has at least 600,000 UK users; WordStar, Word and WordPerfect put together might just about master 100,000 sales. If just 10% of PCW owners buy a copy of LocoScript PC then it will instantly become the best-selling UK PC WP. And that's exactly what Locomotive are counting on.

**H**aving established itself firmly as everybody's favourite word processor, LocoScript is going for a slice of the lucrative PC market. So what are the differences? If you know LocoScript, then essentially you know LocoScript PC. Locomotive have made a conscious effort to preserve the familiar editing environment, and the biggest change will be in the Disc Manager Screen. Because most PCs have large hard discs, they have a more complex directory and subdirectory structure for organising files, and Locomotive are still working out the best way to put this onto the screen. The PC keyboard, unfortunately, isn't designed with LocoScript in mind, so there are none of those nicely labelled [EOL], [PARA] and [PAGE] keys, but with the aid of some sticky keytop labels the cunning DIY'er could easily make an IBM keyboard pass muster.

The two biggest questions that PCW users will want to ask of LocoScript PC are, "Can files be exchanged between PC and PCW?" and, "How fast is it?" Well, LocoScript PC will read LocoScript 2 files from a PCW, but because of the extra features on the PC the files cannot be taken back to a PCW. The biggest problem is that no PC can read 3" PCW discs, so transferring the files is going to be tricky if you plan to take documents to and fro between your PCW at home and PC at work. Locomotive are planning to provide some help in this file transfer process.

As to speed, even a basic PC runs three times as fast as a PCW just by the nature of the hardware, so there'll be a significant increase in performance. In addition to this, Locomotive are building

A: group 0/PRINTER.LST Editing text.  
Layout 1 P:12 LS1 CR+0 LP6  
F1=Exit F2=Layout F3=Style F4=Size F5=Page F7=Spell F9=Options  
PRINTER and LOCOSCRIPT 2

Printer idle. Using A:  
Page 1 Line 12/59  
F1=Exit F2=Layout F3=Style F4=Size F5=Page F7=Spell F9=Options

The master disc on which this document was supplied contains the names of the printer in the table and then took to support a range of different printers.

To discover which Printer Driver file (or files) we recommend for your printer in the table and then took to support a range of different printers. The name of the printer is given in the Driver column. If your printer is not listed in the table, then take a look at the list of drivers in the Drivers disc (available from Locomotive Software). \* Be sure to select the appropriate national language version of this product.

The Printer Driver we suggest is the file called <Printer>.Printer Files given at the end of this document. It also lists the extra Character Set disc. Note, however, that LFQ24 is a recommended Driver will allow you to print the full LocoScript character set range of typefaces. The special 24-pin Drivers are available on the Drivers disc (available from Locomotive Software). \* Be sure to select the appropriate national language version of this product.

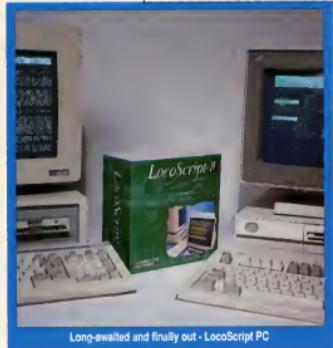
Details of how to install and use these Printer Files are

With the benefit of a Hercules graphics card, LocoScript PC will be able to display the WYSIWYG text — italics, bold, superscripts and all. LocoScript PC can also support the PC's curious 45-line screen mode.

in all manner of tricks to enhance things even further — they have discovered, for example, that they could double the speed by the simple expedient of moving the display two lines at a time rather than one when scrolling through a paragraph. Cut and Paste block operations are also going to be turbocharged by making the text appear on the screen in one fell swoop, rather than gently rolling on character by character.

On the printing front, LocoScript PC will support almost any printer, including the Epson G50500 laser printer. The full range of foreign characters and accents will be there of course, but if even Ancient Greek to Serbo-Croat isn't good enough for you, then the LocoChar character set definition features have been extended. You will be able to set up any number of 'alphabets' of 128 user-defined characters with 32 accents each.

A particularly nice improvement over LocoScript 2 PCW is that different typefaces can be mixed in one document, even using different LocoSpell dictionaries for any paragraphs in foreign languages!



Long-awaited and finally out - LocoScript PC

## That package in full

Finally for the sordid details like price. LocoScript PCW will be on sale from 1st February, and will include LocoChar, LocoMail, LocoSpell and LocoFile as PCW owners know them, plus a goodly selection of printer drivers and typefaces. Add to that a massive set of manuals (including the intriguing concept of an 'official independent guide') and you get to £125, or £99 if you already own LocoScript 2 on the PCW (all prices plus VAT). Not cheap by PCW standards, but very reasonable in the world of PC word processors.

And will the new features of LocoScript PC migrate back to a 'LocoScript 3' on the PCW? "Some aspects of LocoScript PC rely on features of the PC that the PCW doesn't have, so not everything could be ported back," says Howard Fisher. "But we definitely see the PCW as our main market for at least the next two years — our PCW software sales are actually increasing at the moment — and we are of course planning to develop LocoScript further on the PCW." Good news indeed for everyone.

# Add style to your PCW – with LocoFont

LocoFont gives you a range of typestyles to use on your PCW's built in matrix printer. With LocoFont you can match your typestyle to your mood – Roman for an important letter to the bank manager, Script or Penman for more personal correspondence... There are 14 typestyles to choose from – 10 in Set 1 and 4 specialist fonts in Set 2.

FOR SALE: MINI 1000 – Good LITTLE RUNNER, NEEDS A LITTLE WORK. TAX AND MOT UNTIL AUGUST. NEW SUBFRAME AND BRAKES. OFFERS ABCDE ABCDE ABΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Capitals

Roman The minutes of the previous meeting were accepted as correct. There were five matters arising which were ... ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

We have been forced to adopt a tougher approach to returns of faulty product. No returns will be accepted without prior abcd ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Definite The Residents Association « Annual Fête » The fete this year will be held on the 10th June at 2.30 pm ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Finesse After disconnecting the mains power, unscrew the three screws marked 'P' and remove the cover slowly. Be very careful not to abcd ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Modern Mini 15/17 The software contained in this package is supplied to you on the terms and conditions indicated below. The opening of this package indicates your acceptance of these terms and conditions. If such abcd ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Penman It seems ages since I last wrote to you – and even longer since we last met. Now that I've got more time why don't we meet up in London one day soon for a ... ABCDE ABCDE ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Set 1 £19.95

Please find enclosed standard confirmation of your order for an additional 50 brass fittings with screw threads. But note... ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Script Taking as our hypothesis  $\nabla \mathbb{C} \mathbb{E} \mathbb{Z}_2 = 0$   $\nabla \mathbb{Z}_2 \mathbb{C} = 0$  Sans the argument gives the result ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Copper Plate You are invited to Ted's housewarming party. The new house is supposed to be finished on the 27th June, ... ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Script We're glad to hear that you enjoyed the little "surprise" party that we organised for you on your birthday. I'm sorry that ... ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

£2.95  
£2.50  
£1.95  
£4.50

Avocado Pear  
Seafood Cocktail  
Cucumber Soup  
Fresh Mussels  
ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Deco Word Processor: Used to describe a computer together with special software, or simply to describe the software. A word processor provides a facility to create and edit documents on a screen before ... ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Mini 15/17 John & Maureen Rough 21 The Square, West Street, Cirencester, Gloucestershire, Phone 0542 75534 abcde ABCDE ABCDE abΓΔΕ ABΓΔΕ abΓΓ ABCΓΤ 12345 éçöüä 4\*\*\* vðffs

Old English Both sets together SAVE £5

Both sets together SAVE £5

Please send me the following:

FOR THE AMSTRAD PCW 8256/8512

Name \_\_\_\_\_

I enclose a cheque for £ \_\_\_\_\_

Please charge my Access/Visa card

EXP Date \_\_\_\_\_

LocoFont Set 1\*

£19.95

Address \_\_\_\_\_

LocoFont Set 2\*

£14.95

LocoFont Set 1 & 2\*

£29.90

Postcode \_\_\_\_\_

LocoScript 2 & LocoSpell

£34.90

LocoScript 2

£24.95

Signed \_\_\_\_\_

Send to Katy Buchan at:

 LOCOMOTIVE SOFTWARE  
Allen Court, Dorking,  
Surrey, RH4 1YL

TEL 0306 740606

For LocoScript 2  
On the PCW8256/8512

\* For LocoScript 2

Note: All prices include VAT and UK postage

# HARD ACT 'T

The Copyright, Designs and Patents Act looks set to take us we

**I**n an information-driven and entertainment-seeking society like ours, copyright has the potential to affect us at almost any stage of our waking lives - whether we're reading a book, listening to music, watching the television, or more recently, tapping away at the keyboard of a computer.

Through publication of their works, writers, musicians and, in the latter case, programmers, can disseminate knowledge and enjoyment to the rest of the world. Copyright is a legislative device that protects and rewards these authors while allowing the public to enjoy the fruits of such learning at a price it can afford.

Parliament's 1956 Copyright Act set out to protect all kinds of intellectual property that had been committed to a tangible format (the manuscripts of a novel or song, for example) from the type of free and easy exploitation that the development of more sophisticated reproductive technology - like photocopiers - was to herald. We say 'tangible format' because copyright doesn't in fact come into power until an idea has been translated into a form that others can see.

The effect of the Act was to ensure that all original authors of intellectual property could instantaneously claim the copyright on that work as soon as their idea had been committed to a visible format. Now, as copyright owners, they were the only people who could legally grant permission for their works to be reproduced by others. In the years that were to follow, however, it became clear that the Act was leaving the copyright rights of many modern authors - especially of software and information held only on electronic media - in some doubt.

## Updates and amendments

The 1988 Copyright, Designs and Patents Act, however,

which came into force on the 1st of August this year, effectively clarified their position. It represented a kind of 'once and for all' modernisation of the '56 Act to include all those information-based processing systems that were only being whispered about thirty-odd years ago but which are nowadays in widespread use.

The 1985 Copyright (Computer Software) Amendment Act had already gone part of the way when it stated that copyright existed as soon as a program had been translated into a 'retrievable' format. In other words, if a computer program was typed straight into the machine from the computer keyboard - without being first committed to paper - it was entitled to copyright protection.

The Copyright, Designs and Patents Act encompassed and overtook this Act: for the first time, computer software was to be considered 'intellectual property' and, as such, was entitled to the same copyright privileges as any literary work.

So what repercussions does this Act have on the ordinary, unassuming PCW user? The truth of the matter is that he or she might well be in for a rude awakening.

As many of you are aware, a program in the throes of creation can include a number of building blocks or sequential programming sections that have already been incorporated into earlier, established programs. These sections may have been written by yourself or other people. If, as in the first case, you own the original copyright to these 'building blocks', then there shouldn't necessarily be any complications. If, on the other hand, you are incorporating someone else's 'building blocks' into the program you're writing, then the law states that you should formally ask their permission to reproduce them in your program, even if you're using them in a completely different context to the original copyright authors.

## Almost identical clones

The program that you eventually end up with will bear your copyright; even though there are fragments of other people's work in it, you have arranged them in a new and individualistic way to provide your finished work. But - and it's a big 'but' - if you then want to go on and make a copy of that program, you will again have to ask all the original copyright holders for their permission.

IBM, for example, own the copyright on the PC ROM BIOS code. Companies bent on producing a PC clone came up against a major stumbling-block: how to come up with a BIOS for their new clone ROM without infringing the original IBM copyright.

Two groups of programmers, neither of which had anything to do with the original PC model, were relegated to two different rooms, their only direct means of communication being the adjudicating lawyers. The first group was responsible for taking the ROMs apart and working out exactly what they did, though (importantly) not how they did it. Their findings were then communicated - by means of a third party - to the second group who set about building code for a ROM that would do exactly what their counterparts had just specified the original was capable of doing.

But because they were ignorant of the original code,

## Giving it up

As soon as any idea is committed to a tangible storage medium, a copyright is called into existence. Usually the copyright owner is the creator of the work in question, although it is possible to relinquish a copyright to either another individual or an organisation.

Let's take as an example the case of a magazine editor who commissions an article from a freelance writer. Once the commissioned article has been paid for, the copyright on the submitted article usually becomes the magazine's and the magazine can do whatever it likes with it. It is strongly recommended that both parties draw up a written agreement to this effect at the time of the transaction to save themselves any future misunderstandings.

The situation is, however, often different in the case of an unsolicited submission that the editor consequently decides to publish in the magazine. Often the author reserves the copyright on the article and could have it published elsewhere if he or she wanted to.

Intellectual property can be bought and sold just like any other kind. It has been known for authors to give up (or assign) the copyright on their work to their publishers. Again, it's better to have a contract arranged which states that both parties intend to do as much, because once the copyright has been assigned, the author relinquishes any rights that he had to his own work.

So how long does copyright last? Copyright on most kinds of work (literature, music and pictures) expires at the end of the calendar year that marks the 50th anniversary of the death of the creator. If a work has got more than one author (for example, a lyricist and a composer get together to create a song), then it will also have more than one copyright - one on the words and one on the music - which will subsist independently of one another until fifty years have passed since the death of either one.

Where a copyright on a work is owned by more than one person, you would have to secure the permission of all parties concerned before you reproduced the work in any shape or form.

# TO FOLLOW

s well into the next century. Sharon Bradley cuts the red tape.

they could in no way be accused of infringing the original IBM copyright – even if the ROMS shared some code sequences – because the new code had been prefetched and arrived at independently.

### Proving ownership

Under the Universal Copyright Convention, any work bearing copyright protection must display the C sign along with the name of the copyright owner and the year of publication. But because this sign still isn't in widespread use for one reason or another, it's not surprising that many authors become anxious at the thought of having to officially prove copyright ownership. There are, however, a number of ploys that you can adopt which will provide any court of law with incontrovertible evidence that your intellectual property was actually in existence on a given date.

Say you've just written a computer program. You really don't want anyone else to steal your idea. One of the simplest courses of action you can take is to save it to a disc, put the disc in an envelope and send it to yourself by registered post. It might be a good idea to mark the envelope in some way so that you know what's in it when it arrives on your doormat; it becomes worthless once you open it.

The postmark on the envelope will prove that your program was in existence on that date, so don't open it until you have to – if ever – in a court of law. To keep the envelope doubly safe, you could also deposit it in your bank and hold on to the receipt. The same procedure can apply to your latest novel or photograph.

### Double trouble

Duplicating cassette- or disc-bound computer programs is easy. It can also be illegal. If you need to make a copy of a commercial program in your possession – even if it's to keep a back-up – you must first write to the program's publishers and ask their permission, long-winded though it may sound. The only time you don't need to ask for specific permission to make a copy is if the software is accompanied by a statement saying that backup copies are, in fact, allowed.

Some suppliers of business software will restrict the client to using the software in question on one machine alone. For a company wishing to network their machines it can be an expensive business, involving buying as many packages as there are machines to run them. A site licence, on the other hand, allows the prospective purchaser to have one program installed on a number of machines – just so long as they are all situated at the one site.

Following the widespread introduction of microcomputers in schools, many teachers argued that not keeping at least one back-up copy of each master disc they used on a regular basis could only be described as foolhardy in the extreme.

Some educational software companies have responded to this by making duplicate copies of their educational programs available to the teachers. Others even offer to sell secondary duplicate copies of their software at a much lower price – the best solution all round! If you're a teacher

and unsure as to whether the software you're using at school can be copied, don't hesitate to phone the publisher in question and find out. It is, as they say, better to be safe than sorry.

So how long does copyright last on a computer program? As is the case with films, video and audio tapes, records and discs, the copyright on computer programs lasts until the end of the calendar year marking the fiftieth anniversary of the date of publication. More and more now, publishers are printing a P (for published) on software packaging followed by the year. It will therefore become much easier for future users to know exactly when the copyright is due to expire.

One of the main drawbacks of the Copyright, Designs and Patents Act, and indeed of the Copyright Act before it, is the virtual impossibility of policing it properly. Making an illegal copy of your favourite computer game, in the certain knowledge of saving yourself twenty-odd quid, is an activity that is more likely to occur in your home or office than in public and therefore very difficult for anyone else outside it to prove.

As far as commercial piracy prevention is concerned, the ball would appear to be bouncing firmly in the court of the software houses, who are, after all, the ones who stand to lose the most from it; it's up to them to incorporate anti-theft devices into their programs. This is relatively simple with computer games but not quite so easy with business software. Companies don't like to rely on a single disc to get the software they rely on up and running each day.

This much is clear: unless copyright legislation governing the use of software can come to rest on something more substantial than an individual's conscience, its overall effectiveness has got to be considered doubtful in the extreme. ■

### Character Reference

Even though a horrid work is subject to all the usual copyright protection, the characters within it are not. Perhaps you wanted to write a story which placed Bilbo Baggins in an entirely new and original setting; you would not be infringing Tolkien's original copyright providing that the hobbit's character was all that your story had in common with the original work.

## Act of contrition

Infringements of copyright tend to be viewed in two very distinct lights depending on which side of the fence you happen to be on. You may not be able to see anything wrong with 'borrowing' a friend's version of LocoScript; after all, he's told you that he's seriously impressed with it and uses nothing else. Perhaps you should give it a go too? All right, so you won't have a manual showing you how to use it properly, but you'll be able to get help somewhere, and – perhaps most convincingly of all – who's going to know about it anyway?

Wrong. Large-scale illegal copying, or software piracy as it's come to be known, has been estimated to cost the software publishing industry not just thousands, but millions of pounds a year. With companies having to recuperate huge losses like that each year, it's inevitable that the people who put the work into the development and ultimate success of a program are the ones who suffer. Good software costs a lot of time and money to develop, no one will do it if they can't make a living from the process.

There's also this to consider: people who buy illegally copied programs (or copy them themselves) are losing out at the end of the day as well. Try getting the full use out of a package if you haven't got a manual telling you how it all works and what features are available. You get no support from the company, no updates and no redress if it causes you problems.

Some software publishing houses are now producing cassettes or discs in such a way that it is impossible to duplicate them. Signals are built into the original program which, during the copying process, 'paralyse' some of the duplicate's computer commands. If the program that you've just bought doesn't work properly, it is possible that you've been sold a pirate copy. Your best bet is to take it back to the supplier and investigate. Either change it for the real thing or report what's happened to your local Trading Standards Department.

Come and see us at  
The Computer Shopper Show  
Alexandra Palace - 24-26 Nov, stand K1

What?  
could be  
Easier !

# LocoFile

*The computerised address book for your PCW that's easy to search, easy to look up, easy to keep in order and produces labels automatically.*

## LocoFile

The pop-up database for LocoScript 2



## WHAT THE PRESS SAY:

... At any point while working all your records are available instantly and the information from within them can be included in your LocoScript documents ...

Kay Ebwank

Amstrad PCW Magazine, April 1989

... LocoFile's principal asset, apart from being ridiculously easy to use, is the close collaboration with LocoScript ...

Christina Erskine  
Computer Shopper, March 1989

... It's difficult to think of any LocoScripters who wouldn't find LocoFile useful...

Rob Ainsley  
8000 Plus, November 1989

LOCOFILe COSTS JUST £29.95. TO PLACE AN ORDER OR FOR MORE INFORMATION, CONTACT LOCOMOTIVE SOFTWARE



LOCOMOTIVE  
SOFTWARE  
Allen Court, Dorkin  
Surrey, RH4 1YL  
(0306) 740606

# TOTAL CONTROL

Once you use this public domain program  
you'll wonder how you ever got along  
without Newsweep

## Out and about

The (discontinued) 8000 Plus subscribers disc had a very good version of NSWP on, so if you know someone who subscribed in the early part of 1989 ask them for a copy. It came complete with the original author's documentation.

You can get NSWP.COM (as well as thousands of other CP/M programs) from the CP/M User Group; contact Diana Forde at 72 Mill Lane, Hawley, Dartford, Kent, DA2 7RZ. And don't forget the PCW File PD library. Contact Dave Axford on 0428 56438.

If you've ever cursed the multiplicity of utility programs needed to cope with your many files and discs then you've also probably put together a wish list, a list of all those file operations you wish you had just one program to do. You'd probably require it to be fast enough to replace command line operations and yet small enough to fit on just about every disc you've got so that it's always available. You'd want it to be totally reliable and wouldn't it be nice if it was also free?

The program you want exists, and it's called Newsweep. You'll find it listed in public domain libraries as NSWP.COM. Tailored versions for the PCW abound and though they may sometimes have slightly different filenames they're all the same program.

So what is NSWP and what makes it so wonderful? Well it's a kind of program known as a shell. The idea of a shell program is that it surrounds the nasty bits of the command line with something pretty — hence shell. There are other programs in the public domain to do the same thing (including, strangely enough, one called SHELL.COM).

When NSWP is first invoked it quickly reads the current

disc directory and presents on screen an alphabetically sorted list of the files on the disc — including system files which would normally be hidden. Any attributes the file might have are shown by highlighting the letters of the filetype.

Unlike the DIR command NSWP goes much further and by the side of each file you will find its size in kilobytes. As a last service not only are the total number of files on the disk (together with the space they take up) noted at the top of the list but the free space remaining on the disk is shown too.

## Specifications

NSWP can also be invoked with parameters, so you can specify which disc you want logged on and can even log onto every user group at once. To do this while calling NSWP from the a: drive for example you might type:

**NSWP B:\*.let**

which will give you a list of all files with the LET filetype in all user groups on the disc. As you can see from this example NSWP is the ideal utility for dealing with all those Locoscript discs as well.

To start with the first file on the list is the only one displayed and this is the currently selected file. Tapping the [RETURN] key cycles you through the file list one at a time — they scroll up the screen — while holding down the space bar whizzes you through them at high speed. Once past the end of the list the cycle begins again.

While you are in NSWP there are a total of twenty different one key commands you can call on, most of which are fairly obvious as you can see from the screenshot of the list (called up with the question mark). Two of the commonly used commands are B to scroll backward through the list and F to go straight to a particular file.

## Fast forward

When a disc might contain dozens or even hundreds of files it's nice to be able to find the one you want — fast. NSWP accepts wild cards in filenames for the find function, F, delivering you straight to the one you require, or fairly close to it in the list. For example, to find a letter sent in March to Acme Software the command:

```
NSWEEP - Version 2.07 07/17/1984
(c) Dave Rand, 1983 1984
Edmonton, Alberta

A - Retag files
B - Back one file
C - Copy file
D - Delete file
E - Erase I/O files
F - Find file
G - List all disk/user
H - Mass file copy
I - Print file
P - Print file
R - Exit to CP/M
X - Exit to CP/M

127K in 29 files. 45K free.
Tagged files = OK (OK).

  1. A1: DOCUMENT.ED 4K : 
  2. A1: J2000.C 44K : 
  3. A1: LAYOUT.ED 1K : 
  4. A1: LETTER.EDP 1K : 
  5. A1: LETTER.PL 1K : 
  6. A3: LET2PAGE.HDP 2K : 
  7. A1: LETTER.PDF 2K : 
  8. A1: LETTER.HDP 2K : 
  9. A3: LETTER.PL 1K : 
  10. A0: LETTERS.GRP 0K : 
  11. A1: LOGO.C 4K : 
  12. A3: MONUSCR.ED 2K : 
  13. A0: MATHLX.SHD 2K : 
  14. A3: MEMO 2K : 

  0 - Squeeze/Unsqueeze tagged files
  1R - Rename file(s)
  2C - Copy remaining space
  3Y - Tag file for mass
  4U - Untag file
  5V - View file
  6W - Add tag of files
  7Y - Set file status
  8Z - Display this help
  9I - Forward one file
```

```
4. 9S: ADDRESS.LST 2K : x
NSWEEP - Version 2.07 07/17/1984
(c) Dave Rand, 1983 1984
Edmonton, Alberta

Drive A:???????????.999 558K in 79 files. 150K free.
  1. A1: group1.GRP 0K : 
  2. A1: ADDRESS.LST 2K : 
  3. A1: ADDRESS.MB 2K : 
  4. A1: ADDRESS.LST 2K : 
  5. A1: ADDRESS.LST 2K : r New name, or *? add1.lst
  6. A1: ADDRESS.LST 2K : t Tagged files = 2K ( 2K).
  7. A1: ADDRESS.MB 2K : t Tagged files = 5K ( 5K).
  8. A2: COVER 4K : t Tagged files = 10K ( 9K).
  9. A0: D630 .TRP 4K : 
  10. A0: D630 .FCM 2K : 
  11. A1: DISCINFO 8K : t Tagged files = 18K ( 16K).
  12. A0: DISCHAN.JVY 30K : m
  Copy to drive/user? m
  Copy to drive/user? m
  Copying --> A1: ADDRESS.LST to M1:
  Copying --> A0: ADDRESS.MB to M0:
  Copying --> A2: COVER to M2:
  Copying --> A1: DISCINFO to M1:
  12. A0: DISCHAN.JVY 30K : m
```

When NSWP is called it begins by logging onto either the current disc or one that you have specified. It's possible to specify a disc drive alone, a particular user group or all user groups. You can also use a wildcard pattern. For example, \*.LET to show only files with the LET filetype.

Copying files is made very easy indeed with NSWP. Not only can you see the names of the files on the disc in alphabetical order but you can select those you wish to copy and tag them with just a single keystroke. Contrast this with the use of PIP to achieve the same results.

## FM?AC\*.LET

will put you on the first letter for March to the company represented by AC. Even more impressive a partial filename will do something very similar. To find the file NEWTEST.ASM you need search for either N, which will take you to the first file beginning with N or NE which will probably find the file immediately.

Once you've found the file there are a number of things you can do with it. You can view it, delete it, copy it, change the name or do even more esoteric things to it. For example NSWP makes it a simple process to set and unset the various file attributes - using the Y option on tagged files. It can also compress your files for greater storage efficiency.

The last two functions demonstrate one of NSWP's most powerful features, the ability to do the same thing to a whole range of files by tagging them first. To tag a file simply press T when you reach it in the list. As you tag files a running total of the file sizes is displayed. When you go around again each tagged file is shown by an asterisk. Untagging a file is just as easy, simply press U.

Tagged files can be copied, deleted, squeezed, unsqueezed or have their file attributes set and unset, all with no more than a few keystrokes, and all fully visible on screen. Mass deletion of files can be fully automatic or you can ask to be prompted for each one as a final check. Just to be completely sure NSWP will ask you - even on automatic deletion - if you really want to delete protected and hidden files.

This is especially useful since mass tagging of files is easiest done by simply holding down the T key and watching them fly past. You can then do a mass delete of everything that isn't protected. NSWP will warn you of anything you wanted to save.

## Sardine city

The ability to squeeze a file, sometimes by as much as 50 percent, means that expensive three inch discs can be used much more economically, especially those discs used just to back up files for security purposes. Not only will the files fit into less space but they are also virtually immune from casual perusal. Trying to make sense of a compressed text file is impossible.

```
4. M2: COVER      4K : t
5. M1: DISCINFO:  8K : t1 New drive/user/mask? n

NSWEEP - Version 2.07 07/17/1984
(c) Dave Rand, 1983, 1984
Edmonton, Alberta

Drive Mw:?????????? 308K in 8 files. 62K free.
1. M1: ADDRESS1.LST 2K : t Tagged files = 2K ( 2K).
2. M1: ADDRESS2.LST 2K : t Tagged files = 4K ( 4K).
3. M0: ADDRESSES1.B 6K : t Tagged files = 6K ( 6K).
4. M2: COVER      . 4K : 9 Which flags (-4,N,S,M)? 128$ra
Setting --> M1: ADDRESS1.LST to 1 2 3 4 R/O SYS ARC
Setting --> M1: ADDRESS2.LST to 1 2 3 4 R/O SYS ARC
Setting --> M0: ADDRESSES1.B to 1 2 3 4 R/O SYS ARC

4. M2: COVER      . 4K : 1 New drive/user/mask? n

NSWEEP - Version 2.07 07/17/1984
(c) Dave Rand, 1983, 1984
Edmonton, Alberta

Drive Mw:?????????? 308K in 8 files. 62K free.
1. M1: ADDRESS1.B 2K : t
2. M1: ADDRESS2.B 2K : t
3. M0: ADDRESSES1.B 2K : t
4. M2: COVER      . 4K : t
5. M1: DISCINFO:  8K : t
```

One of life's more irritating bugs is trying to deal with protected and hidden files using the supplied CP/M utilities. These are anything but friendly. Contrast that with the way NSWP deals with file attributes. You get an inverse character if the bit is set and setting or unsetting bits is just a keystroke away.

## Historical note

The original SWEEP.COM can also be found in the public domain libraries. It was written entirely in small C (itself in the public domain under a number of operating systems) and underwent a number of revisions and alterations. However, it lacked many of the finer features of NSWP.

NSWP was written in assembler from the beginning and is less than half the size of SWEEP4 (the latest version we know of). It uses up only 12K of disc space. Dave Rand, who wrote most of NSWP in 1983 - 84 included support for CP/M 3 in the program, specifically multi sector read and writes. These allow the program to read and write up to 16K at a single call which greatly speeds up file handling. NSWP reads and writes from disc as fast as it can be done with legal BDOS calls.

For those who are interested in such things NSWP uses Huffman encoding to squeeze files and is compatible with the original squeeze/unsqueeze public domain utility written in small C by Richard Greenlaw. This technique can be used on any kind of file whether it be a binary file or text.

NSWP analyses a file for frequency of distribution of different valid bytes. The compressed file is written as a bit stream, with common bytes allocated less bits and only very rare ones getting all eight. A table is included with the file so that NSWP can reconstitute the original file at a later date. If the compressed file wouldn't be any smaller than the original then it isn't written.

These compressed files can quickly be unsqueezed in the same way that they are created, by tagging them and selecting the Q option. You will notice that NSWP automatically replaces the middle letter of the filetype with a Q when the file is squeezed, when it's unsqueezed again the original letter is re-instated.

Files for tagging can be selected in another, even faster, way. The W option allows you to tag files using wildcards, so \*\* would tag everything, while GA\*.\* would tag all your C language source files that began with G.

Finally, though this article has by no means exhausted NSWP's abilities, you can also print from it with the P option before exiting to the CP/M command line with X. NSWP is the one utility that no one should ever be without. ■

## Bits count

NSWP allows you to set extra bits in filenames that are not used by CP/M itself.

12345678 RSA

If you have a filename as having the bits shown above available then you can set or unset the R (read only), S (system) and A (archive) bits that are used by CP/M. For your own purposes you can use NSWP to set the bits on 1,2,3 and 4 as well. To turn off all the bits tag the file, press Y and when asked which bits you want put in a comma and press [RETURN].

## Copycat

One of the obvious uses of the mass file copy function in NSWP is to copy files for backup purposes. If you don't mind the slight loss of speed you can have the copies verified. After specifying the drive (or possibly a filename for a single copy) simply leave a space and add the letter V to the command.

```
2. M1: ADDRESS2.LST 2K : t Tagged files = 2K ( 2K).
3. M0: ADDRESSES.MB 2K : t Tagged files = 4K ( 4K).
4. M2: COVER      . 4K : e
Erase Tagged or Untagged files (Y/N)? t
Do you wish to use the current (Y/N)? n
Deleting --> M1: ADDRESS2.LST
Deleting --> M0: ADDRESSES.MB
1. M2: ADDRESS1.LST 2K : t
2. M2: COVER      . 4K : 1 New drive/user/mask? n

NSWEEP - Version 2.07 07/17/1984
(c) Dave Rand, 1983, 1984
Edmonton, Alberta

Drive Mw:?????????? 298K in 6 files. 66K free.
1. M2: ADDRESS1.LST 2K : t Tagged files = 6K ( 5K).
2. M2: ADDRESS2.LST 2K : t Tagged files = 14K ( 12K).
3. M1: DISCINFO:  8K : t Tagged files = 14K ( 12K).
4. M1: FLIPPER1.BP 256K : t
5. M1: FLIPPER2.BP 18K : t
6. M0: NSWP .COM 12K : t Tagged files = 26K ( 24K).

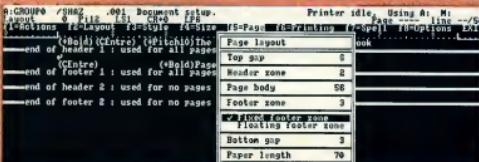
1. M9: ADDRESS1.LST 2K : *e
Erase Tagged or Untagged files (Y/N)? t
Do you wish to use the current (Y/N)? n
Deleting --> M2: COVER
Deleting --> M1: DISCINFO
Deleting --> M1: FLIPPER1.BP 256K : ■
```

Disc management is what NSWP is all about. One of the things that has to be done is to spring clean discs (usually every month or so - don't wait a year). NSWP makes this a fast, safe process. You can delete a single file or do mass deletions of tagged files but either way NSWP checks with you first.

# ALL CHANGE!

Polished-looking printouts with the PCW?  
Sharon Bradley shows you how to  
pep up your pages

## LocoScript 2

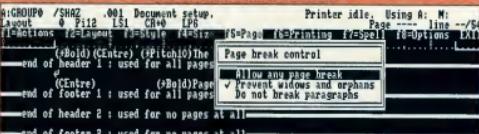


1) To set the depth of the 'header and footer zones', open the [F5] Page menu and choose the Page Layout option. Entering the size of these zones also sets how many lines can be used on each page to print the document itself. Included on the menu are the page length and the sizes of the gaps.

Select Fixed footer zone and your footer text will be positioned in the same place on every page – which is probably what you will prefer anyway. The Floating footer zone option, on the other hand, will position the text immediately after the last line of text on the page – wherever it happens to come.



2) LocoScript's Keep codes are capable of keeping any group of lines together on printout; these may be within one paragraph or even span a couple. Position the text cursor at the appropriate point in the document and press [F5] to bring the Page menu onto the screen. The bottom half of the menu is where you record the number of lines to be grouped with the current line (the one on which you've placed the cursor). When the cursor is on the top line of the group, you will need to record how many lines below it are to be included with the current line - and vice versa.



3) To control your document's page breaks on printout, select the Page break control option on the [F5] Page menu. This submenu is another of LocoScript's Settings menus and offers you three choices: if you don't mind how your paragraphs are printed out, select Allow any page break. To prevent widows and orphans select the second option, and, finally, to avoid all paragraph breaks completely, tick the last option on the menu.

Getting the most out of your word processing program is important if you are in the business of producing clear, attractive, multi-page documents that will be a credit to you or your company. Previous episodes in the series have shown you how to get to grips with LocoScript's header and footer facilities, although we don't suppose for one minute that you will always be happy using them in the formats we described.

The LocoScript page is divided roughly into three zones: the header, the footer and the text zones. None of them, however, are static. This month we show you how to alter the vertical format of the page layout to suit your own text – and printing – requirements.

### LOCOSCRIPT 2

#### Altering the size of header and footer zones

Changing the header and footer set-up of a document requires making alterations to the original Document Setup. To access this Settings menu, bring the 'editing mode' [F1] Actions menu up on the screen and choose Document Setup. Open the [F5] Page menu and choose the Page layout option. The resulting menu is where we record the results of a few calculations we're going to have to make to change the way the lines on the page are distributed among the three header, text and footer zones.

How many lines you allocate to these zones depends on the size of the paper you will be using. For the time being, we're going to stick with our standard A4 cut sheet stationery.

There are a number of pieces of information that have to be fed into this menu: the paper length (in terms of the number of lines that could be printed onto the paper irrespective of the gaps and zones), the number of lines required in, firstly, the header and, secondly, the footer zone, and finally, how many lines occupy the top and bottom gap above and below the header and footer zones respectively.

All the calculations that we're going to do here are made in terms of what we call the document's base line pitch. Again, by default this is 6, which means that six lines are printed to the inch; if you decide to alter the base line pitch to 8, then you will have to recalculate accordingly.

Take a sample piece of paper. Measure its length in inches and multiply that measurement by 6 (the base line pitch). Take the nearest whole number to arrive at the page length: 70. Use this formula whenever you need to calculate overall page length, regardless of its size.

Before we start thinking about how deep we want our header and footer zones, remember the gaps that have to be left at the top and bottom of the page: an inch above the header (which will constitute 6 lines) and half an inch below the footer (3 lines).

Now for the changes. Say we want to start the first line of the header zone as soon as possible after the top gap and we want to make it 2 lines deep. The header text will begin therefore on line 7. The document text will start on line 9. Our footer zone will also be two lines deep (though we must leave three, one for the carriage return that must follow the last line of document text before a footer can be typed in). That means that the footer zone begins on line 64 leaving the desired three line space for the bottom gap. Altogether there will be 56 lines free over which the printer can reposition the main text of the document. This last figure should already be calculated for you by the menu.

#### Keeping groups of lines together

There may be groups of lines in your document, like a chemical equation or poem, that you might prefer not to be interrupted by the LocoScript 'end page here' line

which could split them across two pages. There is another handy layout feature that LocoScript can incorporate into your documents.

The key to keeping lines together like this are some special word processing codes known as **Keep codes**. These are inserted into the text of your document through the document editing [F5] Page menu. Before you do this, move the cursor to the appropriate passage in the document – either the first or last line of the group you would like to keep together. Bring the Page menu up onto the screen.

If you've put the cursor on the first line of a five-line limerick, for example, you will need to enter the number 5 on the bottom line of the menu at the **?? lines below** prompt. This instructs the program to keep the line on which the cursor is placed and the following four lines of the limerick together. Alternatively, enter the same number at the **?? lines above** prompt.

### Controlling paragraph breaks

Just because you've hit the [P]rinter key and wandered off into the kitchen to make a cup of tea or twelve doesn't mean that you and your document are left entirely to the mercy of your printer. Apart from making the alterations we've already seen, LocoScript 2 also allows you a number of choices as far as controlling page breaks are concerned: they can, depending on your choice, happen in the middle of paragraphs or only between paragraphs. In the case of the latter decision, you can also choose whether widows and orphans are allowed. For the non-cognoscenti, widows and orphans are every published writer's nightmare; they are the names given to the single lines which are separated by a page break from the rest of the paragraph – either at the bottom or top of a page. Usually, they are to be avoided at all costs.

By default, LocoScript 2 will split paragraphs between pages. The good news is that it will also either keep back or send on at least two lines of text in a potential widows/orphans situation.

Open the same Document Set-up [F5] Pages menu that you used to alter the headers and footers and select the **Page break control** option. You will find three choices listed, the second one of which is probably the most popular. Make your choice and press [ENTER].

## LOCOSCRIPT 1

### Altering the header and footer zones

From within Document Edit mode, open the [F7] Modes menu. Select **Edit header**, then the [F7] Options menu. Finally choose the [F7] Page Size menu.

The information needed here will be exactly the same as that required by the LocoScript 2 menu earlier on: the overall page length, the depth of the header and footer zones – and so on. As we said before, all the calculations are made according to the base line pitch which we'll leave at 6.

When altering the vertical format of your paper, it's often a good idea to take a sample sheet and mark on it the line allocation for each zone as you go along. That way, if you mistakenly enter an inconsistent value, you will be able to work out more clearly where you went wrong.

### Keeping groups of lines together

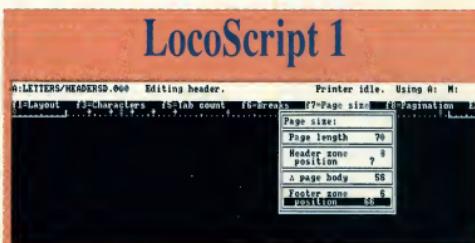
LocoScript 1, like its successor, will respect your wishes to keep certain lines together on the same page during printout.

Move the cursor to the appropriate point in the text and select the [F6] Pages menu. Choose **Keep lines together**. You will then be asked to type in the number of lines you would like to group together above and/or below the point in the text at which you've positioned the cursor.

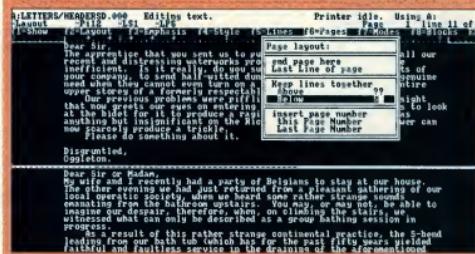
Place the cursor on the line in which our limerick starts, call up the menu and type the number 5 on the **Below** line of the menu. Equally, you could place the cursor on the line in which the limerick ends and type 5 on the **Above** line of the menu. Press [ENTER] and you will instruct the program to place a **Keep code** in the text.

### Controlling paragraph breaks

Once again from Document Edit mode, open the [F7] Modes menu. Choose **Edit header** and then, immediately after, the [F7] Options menu. Instead of opening the Page Size menu, select the [F6] Breaks menu instead. This menu presents you with a simple set of either/or choices. Tick the **Prevented** option to avoid widow and orphan paragraph breaks (that is one line of a multi-line paragraph either remaining on the bottom of one page or sent to the top of the next page on its own). **Preventing Broken paragraphs** simply means that you can stop a page break from occurring in the middle of a paragraph. ■



1) To access LocoScript 1's page size parameters, open the [F7] Modes menu. Select **Edit header** from this menu and then the [F7] Options menu. Finally open the next [F7] menu that is available to you: the **Page Size** menu. As you change the line allocations of the various parameters, the page body value will alter accordingly. If your math in your mathematical ability is a little shaky, don't worry. LocoScript will stop you from entering rubbish by throwing out one of its quaint little 'Inconsistent' error messages.



2) To keep a group of lines together, move the cursor to the appropriate point in the text and call up the Pages menu by pressing [F6]. Select the **Keep lines together** option. Using LocoScript 2, you can move the cursor to the first line of the group, the bottom line of the group, or place it somewhere in the middle. If, for example, you happened to place your text cursor on the second line of the five-line limerick that you want to preserve intact, you would ask for two lines above and four lines below the cursor to be grouped together (the line on which you leave the cursor is always counted twice.)



3) Access the [F6] Breaks menu (item [F7] Options after selecting **Edit header** from [F7] Modes). This provides you with a set of simple either/or choices. Most probably you will allow broken paragraphs (tick **Allowed** with the [F6] key) but choose to prevent widows and orphans wherever possible (tick **Prevented**).



# SK MARKETING

COMPUTER SUPPLIES

10 Fulham Broadway, London SW6 1AA. Telephone 01 381 6618/9 (24 hours)

LONDON'S LARGEST  
REGISTERED  
AMSTRAD DEALER

FAX: 01-381 0528

Personal callers welcome  
Opposite Fulham Tube Station - District Line

COMPARE OUR PRICES BEFORE ORDERING FOR  
UNBEATABLE OFFERS!!

Export, Government and Educational orders welcome

All prices Excl. VAT  
Carriage Free/Mail Order  
Immediate Despatch

## BRITAINS BEST SELLING WORDPROCESSING RANGE

### AMSTRAD PCW 8256



- Fully integrated word processor system
- 62 key Keyboard
- 256K RAM
- High resolution screen
- 1.4MB 3" disc drive
- 9 pin dot matrix printer
- 90 CPS in draft 20 CPS NLQ
- 300 CPS in NLQ
- CP/M Plus with GSX & Dr.Logo
- Mairall Basic with Jetsam

**£320**

On-site maintenance please add £30.00

### ACCESSORIES PCW 9512

Vortex 40MB Hard Drive..... £499.00  
CP/M 9512 AMSTRAD RS232c..... £49.00  
RS Interface.....

SKM 2512K Memory Upgrade Kit  
with fitting instruction..... P.O.A.

FD2 Second Disk Drive 8256..... £115.00

### SKM SPECIALS

PCW Dust Covers (3 piece inc.)..... £9.00  
3" Drive Cleaning Kit..... £9.50  
Margin Maker..... £8.75

### PCW RIBBONS

PRINTER	QTY	QTY	QTY
AMSTRAD	£4.30	£4.00	£3.50
PCW 8256/8512 NYLON	£3.30	£3.00	£2.50
PCW 8256/8512 CARBON	£4.75	£4.50	£4.00
PCW 9512 NYLON	£3.50	£3.00	£2.50
PCW 9512 CARBON	£4.75	£4.50	£4.00

### AMSTRAD PCW MAINTENANCE KIT



**£14.00**

### DAISYWHEELS FOR PCW 9512

AVAILABLE TYPE STYLES  
PRODUCT CODE TYPEFACE  
Courier10 Prestige Pica 10  
Heiti Prestige Pica 10  
Lame Gothic 10/12 Prestige Elite 12  
Script 12 Each £5.00  
For other printer ribbons please call

### BOOKS (no VAT payable)

Mairall Basic By Amstrad..... £9.95  
Programming PCW By Ian Sinclair..... £7.95  
Step by Step PCW By Ian Sinclair..... £7.95  
All in One Mini Office Professional..... £11.95  
Desktop Publishing with the Amstrad PCW..... £9.95  
Locoscript By Ian Sinclair..... £9.95  
Locomail 2 Amstrad PCW..... £11.95  
Locomail - Mail - Spel..... £9.95  
Locking into Locoscript 2..... £13.95

### AMSTRAD PCW 8512



- Fully integrated word processor system
- 62 key Keyboard
- 512K RAM
- 512K RAM
- High resolution screen
- 1x 160K 720K 3"drives
- 9 pin dot matrix printer
- 90 CPS in draft 20 CPS NLQ
- 300 CPS in NLQ
- CP/M Plus with GSX & Dr.Logo
- Mairall Basic with Jetsam

**£405**

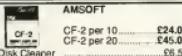
On-site maintenance please add £30.00

### 3" CF2 DISCS FOR AMSTRAD

#### SKM SCOOP



CF-2 per 10.....	£22.00
CF-2 per 20.....	£42.00
CF-2 per 30.....	£63.00



CF-2 per 10.....	£24.00
CF-2 per 20.....	£45.00
Disk Cleaner.....	£6.50

### WORDPROCESSING

Tatword 8000.....	£16.00
Tatprint 8000.....	£12.50
Tatspell 8000.....	£12.50
Tat Sign.....	£35.00
Pocket Protect.....	£26.00
New Word II.....	£44.00

### LOCOMOTIVE SOFTWARE

Locoscript 2.....	£21.00
Locoscript 2 with Locospell 2.....	£20.00
Locospell 1 (for Locoscript 1).....	£20.00
Locomail 1.....	£17.00
Locomail 1 and 2.....	£17.00
Locofont.....	£18.00
Locofont II.....	£18.00
Locofile.....	£26.00

### DATABASES

Campus II.....	£30.00
Sage Retrieve.....	£40.00
Sage Magic Filer.....	£42.00
DataStage (Digital) Version II.....	£28.00
Superbase 3.0 Version II.....	£28.00
Database Manager (At Last).....	£17.50
Masterfile 8000.....	£25.00
dbase II.....	£25.00
Masterfile Plus.....	£35.00

### ACCOUNTS

Sage Popular Accounts.....	£35.00
Sage Popular Accounts Plus.....	£37.00
Sage Popular Invoicing.....	£45.00
Sage Popular Payroll.....	£45.00
Map Integrated Accounts.....	£45.00
Map Integrated Payroll.....	£36.00
Conssoft Stock Control.....	£38.00

Very successful - many new features  
5 separate programs - Wordprocessor  
• Database • Spreadsheet • Graphics  
• Communication

OUR PRICE ONLY £27.00

### AMSTRAD PCW 9512



- Z80A processor
- 512K RAM
- 512K RAM
- 3" 720K drive
- 62 Key Keyboard
- High resolution screen
- 1x 160K 720K 3"drives
- 9 pin dot matrix printer
- 90 CPS in draft 20 CPS NLQ
- 300 CPS in NLQ
- Locomail software
- CP/M Plus with GSX & Dr.Logo
- Mairall Basic with Jetsam

### FREE SHEET FEEDER WITH PCW 9512

**£435**

On-site maintenance please add £30.00

### DESKTOP PUBLISHING

First Sheet Editor Plus.....	£39.00
The Database Publisher (software).....	£20.00
Database Desktop Publisher (with AMX mouse).....	£55.00
AMX Mouse Package (with Desktop).....	£40.00

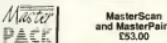
### STOP PRESS

13 Fonts, Clip Art, Typesetting, Cut & Paste Up, Graphic Design, Step Press (Software only).....	£28.00
Step Press & AMX Mouse.....	£53.00

### SPREADSHEETS

Amssoft Supercalc 2.....	£37.00
Cracker II Turbo.....	£37.00

Master Scan.....	£49.00
Master Paint.....	£13.00



MasterScan and MasterPaint.....	£53.00
---------------------------------	--------

### DOT MATRIX PRINTERS

Star LC10 Multifunction Printer.....	£150.00
Star LC10 Colour Printer.....	£185.00
Star X15 120ips 30Inch 136Col. ....	£289.00
Star LC4-10 Latest 24Inch 9Pin Machine.....	£289.00

### PANASONIC PRINTERS

Panasonic KX-P1124.....	£265.00
Draft - 160 cps, NLQ - 63 cps.....	£265.00
Panasonic KX-P1180.....	£165.00
Draft - 132 cps, NLQ - 38 cps.....	£165.00

### AMSTRAD LC4000

Amstrad LC4000.....	£165.00
Amstrad DMP3250.....	£189.00
Amstrad C30300.....	£230.00
Amstrad DMP3250.....	£130.00
Epson EX1000.....	£565.00
Epson FX890.....	£595.00
Epson FX1050.....	£399.00
Epson FX850.....	£305.00
Epson LQ590.....	£269.00
Epson LQ850.....	£429.00
Epson LQ1050.....	£565.00

### AUTOMATIC SHEET FEEDER

The ASF9512 is an automatic sheet feeder for the PCW 9512. It will hold up to 30 sheets of paper, enabling either multi-page documents to be printed without the need for the user to handle the paper. The sheet feeder can be attached to the printer in seconds, leaving the printer to accept individual sheets of paper or the standard tractor assembly.



£75 ONLY

### ACOUSTIC HOOD FOR YOUR 9512



SKM's most economic solution to noisy printers

- Up to 90% noise reduction
- See through lid keeps noise in and dust out

### GENERAL & UTILITIES

Mavis Easy Labeler.....	£23.00
Robot Plan.....	£10.00
Plan It.....	£18.00
Jankey Crash Typing.....	£16.00
Jankey Two Fingers.....	£16.00
Jankey One Finger.....	£10.00
Personal Tax Planner by Digital.....	£20.00
Business Controller by Digital.....	£65.00

### LEISURE SOFTWARE

Cyrus Chess.....	£12.00
Colossus 4 Chess.....	£14.00
Batman.....	£11.00
Tomahawk.....	£13.00
1000 Words.....	£12.00
Trivial Pursuit.....	£14.00
Head Over Heels.....	£11.00
Ace Match Day II.....	£12.00
Tetris.....	£14.00
Clock Chess.....	£14.00
Steve Jobs Snooker.....	£11.00
Computer Games 4.....	£10.00
Time & Magic.....	£10.00
Brain Clougs Football.....	£10.00
Colossus Bridge.....	£15.00
Memory Palace.....	£15.00
Living Daylights.....	£14.00

### MODEMS

AMSTRAD V21/V23  
Features 1200/75, 75/1200, 300/300

Baud rates



### 24 HOURS

### ANSWERPHONE

### FOR CREDIT

### CARD ORDERS

Export, Government and Educational orders welcome

## SALES HOTLINE

01 - 381 - 6618

PERSONAL CALLERS WELCOME 9.30 - 5.30

All prices subject to change without notice.

All goods subject to availability

10 Fulham Broadway, London SW6 1AA

TEL: 01-381-6618-9 FAX: 01-381-0528

# STAND AND DELIVER

You read 8000 Plus for PCW support but for a wider view of the computer world Steve Patient thinks you need to see the shows



Amstrad changed their stand this year. It looked less like something from the set of *Close Encounters* and more like something from *Qz*. A great improvement.

**J**ust two or three years ago, the recently held PC Show (nee Personal Computer World show) was the show to be seen at whether as an exhibitor or as a spectator. It had everything and only the biggest names in the industry dared to stay away. The show was intended to cover the whole range of activities from obscure games machines to multi-user minis and there were few alternatives for the seriously interested computer enthusiast. Is this still so now?

These days the PC Show (30th September to 1st October) has to compete with several other British computer shows (the huge Which Computer? Show in Birmingham earlier in the year as well as specialist shows like the new DTP show on October 4) and pan-European shows, such as the one in Frankfurt.

Still, the PC Show is the one that is probably most in the computer owning public's eye, the one everyone knows and therefore the one the others tend to be judged by; so how is it looking after all these years?

Well, for one thing it definitely looked smaller with several noticeable omissions – some due to the DTP show no doubt – including well known printer manufacturer Star Micronics along with several other big name hardware manufacturers. Of those who were there, many had smaller stands than in previous years, and ominously, there appeared to be empty (unsold?) stands.

There has always been a dichotomy between those companies who see the PC Show as a chance to sell their products on the day and those just putting in an appearance in order to raise their public profile. But while there is no doubt that while the show can generate publicity for a new company or product the main *raison d'être* of vendors is to make new sales contacts; they see it as a trade show. This leads to the three closed days with just dealers and the press before the buying public are allowed in.

Disparate attitudes to the show meant that while I was able to speak to directors on some stands I had to be content with a few where those present could do no more than refer me to head office for information – very strange when you consider the expense of mounting a stand at the show. Perhaps they were the ones waiting for the last days when anyone could go (so who were all those young persons in the press section?).

## PCW probe

On the PCW side users were well served by companies like Armor, Iansyst, Amstrad and Locomotive – not to mention a host of stands selling cheap thines and thats (I told you not to mention...). Of course Future Publishing were there as well

promoting your favourite magazine. But the fact remains that with PCWs selling into private homes rather than large businesses it has never been worth while for companies supporting them to buy space at the large shows.

As if to underline this observation it has to be noted that even Locomotive are now pushing a product for the PC (what we want to know is which Future magazine will support LocoScript PC if Amstrad bundle it with a cheap PC and a printer?).

Ostensibly the show was divided into three sections; the trade hall, the leisure hall and the central hall, but once past the front doors it was rather difficult to find the dividing lines; even the games section was quiet compared with previous years. But the biggest disappointment to me was the lack of Far East exhibitors with their weird and wonderful widgets (who were much more in evidence last year – presumably new orders proved few and far between).

One show feature that I like are the presentations. These are an opportunity for software houses to show buyers their products in use, what they think are the important features and how they think their product scores over the opposition. This is interesting as much for what it reveals about marketing as about software. Add to the inevitable hype the expression of a presenter going through their spiel for the tenth time and the whole thing can take on a truly surreal quality. Not to be missed.

## Conclusions

Overall the show seemed more restrained and uncertain than in past years, as if it had lost track of what it's saying and who it's saying it to. Is it a shop window for the corporate computer manufacturers, for software houses selling £500 packages, for box shifters on tiny margins or a chance to try before you buy for games players spending £15 each? These are all very different markets where customers are used to being treated in different ways. Can one show conceived in the days when computers were still regarded with something approaching universal awe, adequately serve them all?

For individuals looking for ideas, the PC Show is an eye opener, but for big companies looking to raise their profiles with buyers? There has to be an element of faith at work. If you're selling £5000 CAD systems why meet people looking for a box of cheap discs? It's hot, dry and exhausting – but I'm glad I went. It remains one of the few places where you still stand a chance of seeing everything from Psion Organisers to networked Unix systems; and I'm still fascinated.



Locomotive had their usual range of PCW products on display but were pushing LocoScript PC rather heavily.



Even in the first hours of the first day there is a lot of activity but the successful exhibitors can persuade people to stop.

**GOVERNMENT  
EDUCATIONAL  
& OVERSEAS  
ORDERS WELCOME**

All prices subject to change without notice

**RSC  
LIMITED**

**ALL PRICES  
EXCLUDE VAT  
FREE DELIVERY  
(UK MAINLAND)**

**AMSTRAD PCW RANGE**

PCW 8256	£315.00
PCW 8512	£400.00
PCW 9512	£439.00

NOW WITH FREE ASF9512 SHEET FEEDER

On-Site maintenance available on request.

*Amsoft*



**CF-2**

**COMPACT FLOPPY DISC**

DOUBLE SIDED...FOR SINGLE SIDED FLOPPY DISC DRIVE

Why take chances with inferior disks, buy the best for your PCW, ONLY use Amsoft CF-2 Disks.

- Genuine Amsoft CF-2 Compact FloppyDisks
- Fully Guaranteed
- Reliable Time after Time

Quantity	Cost per box of 10
10	£19.50
20	£19.00
30	£18.50
40	£18.00

Please call for other quantities

**RSC PCW TOP 30  
SOFTWARE HIT LIST**

**ACCOUNTS**

Sage Accounts.....	£56.00
Sage Accountant Plus.....	£88.00
Sage Invoicing.....	£40.00
Sage Payroll.....	£40.00
Stockmarket.....	£25.00
Money Manager.....	£24.00

**DATABASES**

Sage Retrieve.....	£40.00
Master File 8000.....	£28.00
Dbase II.....	£60.00

**DESKTOP PUBLISHING**

Fleet Street Editor.....	£29.00
Stop Press.....	£29.00
Stop Press + AMX Mouse.....	£54.00

**SPREADSHEETS**

Supercalc 2.....	£38.00
Cracker II (Turbo).....	£35.00

**GRAPHICS**

Masterpack.....	£54.00
(Scan & Paint)	

**WORDPROCESSING**

Pratex.....	£33.00
Lacascript2.....	£20.00
Lacascript 2 with Locospell2.....	£27.00
Locaspell 2.....	£16.00
Lacamail 1 & 2.....	£25.00
Locofont 1.....	£16.00
Locofont 2.....	£12.00
Locofile.....	£25.00
New-Word II.....	£42.00

**GENERAL**

Mini Office Professional PLUS.....	£27.00
(9512 & Dual Drive 8000 Series)	
Sage Chit Chat.....	£69.00
Sage Chit Chat with Linnet Modem....	£205.00
Easy Labeller.....	£21.00
Rotate.....	£16.00
AMX Mouse & Desktop Utilities.....	£47.00

**DISK STORAGE BOXES**



AMS 10L (each).....	£5.50
AMS 10L (x2).....	£10.00
AMS 10L (x3).....	£13.00
AMS 30L (each).....	£11.50

**MARGIN MAKER**



Single sheet guide for the PCW 8256 & 8512.....£9.10

**9512 SINGLE SHEET GUIDE**

Sturdy aluminum and perspex construction.  
RSC SPECIAL PRICE.....£14.95

**NEW ASF9512 SHEET FEEDER**



At last, a quality sheet feeder for the Amstrad 9512. A valuable addition to your 9512 printer. Includes modified software.  
RSC SPECIAL INTRODUCTORY PRICE.....£69.00

**PCW ADD-ONS**

FD4 (1Mb Drive).....	£115.00
(Second Disk Drive for the 8256/9512)	
Amstrad RS232 Centronics Interface.....	£45.00
PCW 8256/8512 Memory Upgrade.....	£20.00
RSC PCW Printer/Power Extension 8256/8512.....	£11.00
9512 Printer Extension.....	£9.00

**ALL PRICES EXCLUDE VAT**

EDUCATIONAL, CORPORATE, OR VOLUME PURCHASERS PLEASE CALL FOR ASSISTANCE

**Telephone: (0923) 243301**

(24 hours)

## COPY HOLDERS



RSC L2 Desktop	£12.00
RSC L1 Desk Clamp	£12.00

A must for every workstation, can be positioned at almost any angle.

## PCW RIBBONS

Min order 2's	
QT 2	£4.00 each
QT 5	£3.50 each
QT 10 (or more)	£3.00 each
PCW Multisize Ribbons	£5.00 each
PCW Colour Ribbons (Blue/Brown/Red/Green)	£5.00 each

Ribbons available for most other printers.

## PCW 9512 RIBBONS

Minisize	£3.35 each
QT 2	£3.35 each
QT 5	£3.15 each
QT 10 (or more)	£3.00 each
Fabric	
QT 2	£2.25 each
QT 5	£2.00 each
QT 10 (or more)	£1.75 each

For DyeSublimation Printers Only.

9512 Colour Ribbons	
(Blue/Brown/Red/Green)	£5.00 each
Coupler 10 Script 120 dot/10	
Recto 10 Thesis P5 Prestige Elite 12	
Laser Gothic 10/12 Prestige Pm Mini Gothic all	£5.25 each
Some available in French & German at	£9.50 each

## PCW DASIWHEELS

Coupler 10 Script 120 dot/10	
Recto 10 Thesis P5 Prestige Elite 12	
Laser Gothic 10/12 Prestige Pm Mini Gothic all	£5.25 each
Some available in French & German at	£9.50 each

## AMSTRAD PCW PRINTER MAINTENANCE KIT

For B256/8512, removes dirt and ink deposits to maintain maximum print quality.	
RSC PRICE	£14.00

## STANDARD PRINTERS & THE PCW

RSC237 Centronics Interface - Connect the B256/8512 to any standard printer, or as the 9512 already has this facility built-in, connect the 9512 to Communications peripherals.

RSC Special Offer

RSC C44 Cable [Interface to Parallel Printer]

### EPSON

LX400	£135.00	LX500	£180.00
FX850	£305.00	FX5050	£399.00
EX1000	£565.00	IQ400	£189.00
LQ550	£765.00	LQ850	£425.00
LQ1050	£865.00	LQ860 (Colour)	£529.00
LQ1060 (Colour)	£865.00	LQ2550 (Colour)	£925.00

### STAR

LC10	£155.00	LC10 (Colour)	£189.00
LC24-10	£760.00	NC15	£265.00
FR10	£310.00	TR15	£410.00
XR24-10	£410.00	XR24-15	£530.00

### NEC

P2100	£265.00	P6+	£429.00
P7+	£545.00		

### PANASONIC

KX-P1180	£165.00	KX-P1124	£269.00
KX-P1540	£269.00		

### AMSTRAD

DMP3250	£110.00	DMP4000	£199.00
LQ35000	£219.00	LQ50000DI	

### DAISY WHEEL PRINTERS

JUKI 6300	£445.00	JUKI 6500	£699.00
-----------	---------	-----------	---------

## 4-WAY MAINS MULTI-SOCKET



4 Way mains distribution socket. With built-in overmold to give full protection from mains borne spikes and surges	£15.00
Spike protected plug	£9.50

## ANTI-STATIC MATS



RSC M-02 Anti-Static Mouse Mat	£6.95
280 x 210 x 4mm Fully Earthed when connected.	
RSC M-03 Anti-Static Keyboard Mat	£8.95
595 x 250 x 4mm Fully Earthed when connected.	
RSC M-04 Anti-Static PC Mat	£14.95

## RSC TOP 10 GAMES

Batman	£10.00
Skribble	£12.00
Televis Pursuit	£12.00
Templebreak	£13.00
March Day II	£10.00
Steve Davis Snooker	£12.00
Time 8 Magic	£10.00
Brain Clough's Football	£10.00
Colosses Chess	£12.00
Colosses Bridge	£12.00

## LABELS

1,000 1 Across	£6.00
2,000 2 Across	£8.65
2,000 2 Across	£13.50

## LASER LABELS

3,000 3 Across	£13.50
----------------	--------

## RSC E21A KEYBOARD STORAGE DRAW



The RSC E21A keyboard storage draw features a sturdy steel & plastic construction. A PC keyboard locates in the bay which can be safely tucked out of sight when not in use. Saves space on your desktop & provides protection from dust & dirt. CPU & monitors sit on top.	
RSC PRICE	£27.00

## PRINTER PAPER

80 Column listing paper see box	
17" x 9.5" 1 Part Plain 60gms 2,000	£13.50
17" x 9.5" 1 Part Plain 80gms 2,000	£19.00
17" X 9.5" 2 Part NCR 1,000	£21.50
A4 1 Part Plain 70gms 2,000	£19.00
A4 1 Part Plain 90gms 1,500	£18.50
12" Column listing paper per box	
17" X 14.5" 1 Part Plain 2,000	£17.00
11" X 14.5" 1 Part M/Rule 60gms 2,000	£17.50

## BOOKS - VAT FREE

Mallard Basic - Amstrad	£9.95
Program Your PC - Snicker	£7.95
Step by Step Guide to LaserScript	£4.95
All in One Mini Office Professional	£11.95
Desktop Publishing with the Amstrad PCW	£9.50
LaserScript 2 - Snicker	£9.95
LaserScript 2 & Amstrad PCW - Hughe	£11.95
LaserScript 2 & Mail/Spell - Bradshaw	£7.95
Looking into LaserScript 2 - Rogers	£13.95

## 3" DISK DRIVE HEAD CLEANER

The Clear Head	£6.50
----------------	-------

## MICRO design II

### The Rolls Royce of PCW desk-top publishing.

TYPESETTING • GRAPHICS • FONT DESIGN • PAGE LAYOUT • TEXT EDITING • PRINTING

The fantastic new DTP package from Creative Technology. Micro Design II is fast and easy to use, running on the PCW8256, PCW8512 or PCW9512.

Fully Compatible with files from LaserScript, Protext, Wordstar, AMX Stop Press and many other popular packages. Micro Design II supports hard-disk drives both on the Kempstar and AMX mouse systems. Huge range of lettering styles and a comprehensive range of Graphic Art & Design functions. Includes 25 fonts, a whole disk of graphic 'cuts' and 'areas', and a clear & concise 140 page user manual.

RSC Special Introductory Price £39.00

EDUCATIONAL, CORPORATE, OR VOLUME PURCHASERS PLEASE CALL FOR ASSISTANCE

RSC Limited, 75 Queens Road, Wotton, WOT 2QN.

Fax: (0923) 37946 Telex: 2565871

Callers Welcome

< NEW > < NEW >

## ULTIMATE WORD

- Test your knowledge of English words
- LARGE SUPPLIED DICTIONARY \*
- CREATE YOUR OWN DICTIONARY \*
- ADD WORDS DURING THE GAME \*
- GREAT FUN FOR ALL THE FAMILY
- SUITABLE FOR CHILDREN AGED EIGHT TO EIGHTY

£ 14.95

< NEW > < NEW >

## ULTIMATE SUMS

The fun way for your children to learn and practice sums

- EIGHT TYPES OF SUM \* EIGHT LEVELS OF DIFFICULTY \*
- UP TO EIGHT PLAYERS \*

WITH INDIVIDUAL SCORE SHEET \* TIME, DIFFICULTY LEVEL AND TIMER \*

- COMPREHENSIVE SCORE SHEET \*

AVAILABLE AT ANY TIME OR PRINT A PERMANENT RECORD

"ideal for bar staff who cannot tot up the cost of a round properly" APCW  
"It's great fun, easy, and fun" APCW

ULTIMATE SUMS was designed with the advice of teachers, and has been fully tested by children. The program is very easy to operate - it's child's play.

ULTIMATE SUMS is suitable for children aged five towards mid-teens

£ 14.95

## ULTIMATE QUIZ

Learning can be fun!

- ONE TO EIGHT PLAYERS \*

- SUPPLIED WITH TEN SEPARATE QUIZZES - 1000 QUESTIONS \*
- French - German - Italian - History - Geography - Sport
- Quotations - Trivia - General Knowledge - Learning to Drive
- OPTIONAL JOKES - TIMER - NOUGHTS & CROSSES \*
- COMPREHENSIVE SCORE SHEET \*

Analyse the performance of each player and keep a record recalled on screen

- SUITABLE FOR USE IN SCHOOLS - CLUBS - HOME \*

Ideal for charity fund raising, pub quiz night, family fun

- MENU DRIVEN - VERY EASY TO USE \*

+ + PLUS + + +

\* ULTIMATE TEST \*

The new quiz program for use with ULTIMATE QUIZ question files. One player against the clock, can you take the ULTIMATE TEST?

+ + PLUS + + +

- ULTIMATE QUIZ QUESTION PRINTER \*

Quiz sheets for your school or club. Use the ULTIMATE QUIZ question file to prepare quiz sheets, select the question file and the number of questions on each page. Choose which questions you wish to use and the program does the rest. Each sheet is headed with your text. Answers on a separate sheet can be printed on A4, A3 or C6 paper or your word processor.

+ + PLUS + + +

- ULTIMATE QUIZ QUESTION EDITOR \*

Edit any of the supplied quizzes or create your own, it's very easy. Any number of quizzes can be saved on disc. Your quiz is suitable for use with ULTIMATE QUIZ or the question printer.

What the papers say:

"The jewel in the crown of this program is... the ULTIMATE QUIZ EDITOR which enables you to create your own quiz files. It's well laid out and simple to use" AMSTRAD PCW Magazine

"Another of the program's major strengths lies in its Edit program which allows you to devise your own quiz files. It's quite easy to do. You can therefore edit it and make quizzes to test your children on Chemistry or Maths or whatever" 8000 Plus

"Ultimate Quiz is surprisingly versatile... offers a seemingly endless supply of Trivial Pursuit style multiple choice questions. Few of them are obvious and your answering keypress is rarely a confident one" 8000 Plus

"To avoid questions being repeated (and this is where a lot of rival programs fall down) the program will keep a record of the ones which have been asked. Only if the quiz is played long and hard will some of the questions start to provoke déjà-vu" 8000 Plus

£ 14.95

## THE USEFUL DISC

A collection of 20 useful programs, to help you use the computer to the full

- BAR CHARTS \* CALENDARS \* COLUMNS \*
- CONVERSIONS \* DIARY \* DISC LABELS \*

- FILE MERGE \* PRINTER SET-UP \* ASCII PRINTER \*

\* ENCRYPTION \* ASCII SORTER \* TIMER \*

\* WORD COUNTER \* SIMPLE DRAWINGS \*

- FRUIT - SHOOT - SQUASH FOR THE CHILDREN \*

- \* REVERSIS - Learning the rules is easy! Winning is not!!! \*

£ 14.95

ULTIMATE WORD - ULTIMATE SUMS - ULTIMATE QUIZ - THE USEFUL DISC  
are all published and produced by DGC Software

ONLY AVAILABLE FROM:

### COPY COMM LTD

Aytounhill, CUPAR, Fife KY14 6JH

Orders To:

COPY COMM, FREEPOST, CUPAR, FIFE KY14 6BR

Telephone 033 77 444

(Mon to Fri, 9 to 5 - Human Being, Other times - Internal Machine)

FAX: 033 77 445 (Anytime)

VISA - BARCLAYCARD - ACCESS - MASTERCARD - AMERICAN EXPRESS - DINERS CLUB

The Professional Serial/Parallel Interface  
For The Amstrad PCW 8256 8512 & 9512

AVAILABLE NOW

A Choice of Interfaces From

**SCA**  
SYSTEMS

**SCA Professional £49.95**

**SCA Professional Plus £59.95**

Both prices include VAT please add £1.55 for postage

\*100% Compatible\* \*Money Back Guarantee\*

Both Models Feature

\*Full Duplex RS232 Serial Port\* \*Full 8 Bit Parallel Port\*

\*Secondary 2 Wire Serial Port\* \*75 to 19200 Baud\*

\*Printed User Manual\* \*New Stylish Black Case\*

**Professional Plus Has All The Above +**

\*Real Time Clock\* \*Calendar\* \*Demo Disk\*

\*Rechargeable Battery Back-Up of Time and Date\*

\*Automatic CP/M Time & Date Stamping\*

DEALER ENQUIRIES WELCOME

**SCA Systems Ltd**

61 Ferringham Lane

Ferring West Sussex

**DIRECT ORDER**

**HOTLINE**

0903-700288



## Com-Stax

THE ULTIMATE SPACE SAVER

"Interesting solution ..... thoughtfully designed" says 8000 Plus

The new Com-Stax 8 Series is

a unique stand that will

stack your PCW 8256 or 8512

plus your keyboard and printer in

under a quarter of a square

metre of floor space. Its

reclining monitor position

and angled keyboard make

the PCW even more user

friendly. The Com-Stax is

98 cm high, 41 cm wide

and beautifully finished in

durable red, white or black

lacquer, the unit comes to

you as a flat pack kit which is

easily assembled in minutes

with the allen key provided



**THE PRICE: £35.00**

PLUS VAT £5.25 and P&P £4.70

TOTAL £44.95

**TO ORDER:**

Post your cheque for £44.95

together with your name and address

and choice of colour red white or black to -

**COM-STAX LTD, FREEPOST, LONDON, SW5 0BR**  
**Tel: 01244 8292**

please quote 8

Please allow 28 days for delivery The Com-Stax is a Copyright design Patent applied for

PCW 8512 and PC15 Models and  
Add-Ons now available. Phone or  
write for brochure & prices.

# SHAKY STORY

Topologika's new game prompts Rod Lawton to get the play right

## AVON

£14.95 • Topologika • PO Box 39, Stilton, Peterborough PE7 3RL • 0733 244682

**W**hat do you do with a kilted Scotsman? How do you escape the attentions of that glamorous queen on the barge? What's so dangerous about Bare Mountain? Why shouldn't you enter the Capitol on the 15th of March?

Those who detected a common theme to those questions should immediately award themselves a dozen brownie points. They should also enjoy Avon, the latest adventure release from Topologika. Taking the works of William Shakespeare as its inspiration, it deposits the hapless player in a strange, unfamiliar world filled with cackling witches, hunchbacked kings and enchanted woods. Your aim is simply to get back to reality, but between that ideal state and your current position lie more than a few problems.

The world you have to explore is quite large and very varied. It undergoes abrupt transitions from Roman villas to deserted beaches, from quiet graveyards to 'blasted' heaths. And along the way you'll meet all manner of characters - some who'll help you, some who have objects you need and some... well, let's just say there are some you should most definitely steer clear of.

Avon takes as its theme the world and plays of William Shakespeare and integrates them into a typical 'find and solve' adventure. What happens as you proceed is that you come across puzzles and objects which feature in the bard's plays. Their use is quite well-judged, in that the answer tends to come to you in a blinding flash of inspiration. You don't have to know the plays off by heart, though, as sheer inspiration is just as important.

## 'Oh, proper stuff!'

Finding solutions to the puzzles is in fact extremely important. You can't just use the Save Game feature and put up with being killed repeatedly until you stumble across the right answer. The programmer has 'spoiled' the Save Game option in places, meaning that certain actions won't work unless you solved the puzzle 'cleanly'. That's more, where you come across a maze it's no use mapping it and thus assuming you've solved it once and for all - a new maze is generated each time you visit it.

These characteristics alone set Avon apart from the majority of releases. Written by Dr. Jonathan Partington, it improves further on traditional adventuring with both a (metaphorically) colourful backdrop and excellent plot structure. Perhaps its best feature is the way it relates traditional adventuring and puzzle-solving with facts we all half-know. Without having read Shakespeare's entire works, most of us have come across segments, quotes or famous catchphrases, and it's these which come to the fore in each new situation. Either they're delivered in the text for you to ponder over as you seek a solution, or they suddenly appear in your mind, triggered by careful hints on-screen.

Another excellent feature of the game is the built-in help mode. If at any stage you come to a problem you simply can't solve, simply typing 'help' will bring up a special help

## Monstrous bargain

Bundled with Avon is another adventure from Dr. Jonathan Partington - Monsters of Murdac. It takes place in the mysterious ancient forest of Murdac, a wood which has remained totally impenetrable until the old sorceress Duessa opens a path for you, at the same time muttering something about a quest...

Whether you survive the cannibals, ogres, the Old Man of the Sea and worse depends on your adventuring skills. Murdac features the same extremely useful Help mode found in Avon, and actually first appeared way back in 1986, courtesy of Global Software. In its latest incarnation it sports a couple of extra locations, but otherwise is identical to the original.

menu. By referring to clue numbers printed on a sealed envelope that comes with the game you can obtain a solution via a series of carefully-constructed hints, each of which takes you closer to working out the answer for yourself, without giving away too much. If you stay stuck, even after the final hint, you're offered a final solution - but not before being warned it's on its way.

## Back to the future

Avon is a fairly anachronistic release, in that it is a text-only adventure written in an age where graphics are all. The whole adventure genre, too, is undergoing a shift from traditional 'collect and solve' patterns into single and multi-user role-playing graphic extravaganzas. Traditional adventuring is not dead yet, though. Indeed, as long as releases of the quality of Avon keep coming along the genre should keep going for years.

And while the idea of a text-only adventure may seem anathema to anyone who's played such games as Corruption and Jinxter, it does have its advantages. The PCW is not a graphically accomplished machine, and it's not at its best displaying green and black digitised renditions of images from other versions of games. In Knight Orc, for example, about the only way to make sense of the pictures is to walk thirty feet away and squint at them from the corner of one eye...

It's fair to say that unless screens can be drawn specifically to take account of the PCW's own graphics limitations, you're better off with a plain text-only adventure - particularly if that means there's more room on disk for extra gameplay!

And gameplay is one of Avon's strong points. The action takes place over a very large area and there are a great many puzzles to be solved. Some of them are extremely difficult, but all of them can be worked out given the right turn of mind. The solutions, once discovered, are invariably logical and frequently relate to scenes from the plays which you kick yourself for not remembering straight away. You'll end up playing Avon for a long, long time - partly because it's witty, compulsive stuff, and partly because it is not at all easy and solving it will be a real achievement. Thoroughly recommended. ■

# FASHION VICTIM

The new Sharp IQ bills itself as a personal organiser, but how does it shape up in use?



There's no doubt that the Sharp IQ looks good. But just how useful is it when it comes to real world applications?

## Secret service

The IQ offers rather good security in the form of passwords. Almost any kind of access can be controlled by a password, and programs and defining data as secret.

You can protect whole categories of information or just a single item (like a phone number), but be warned, forget your password and you could find yourself with a very serious problem - unlike CP/M there doesn't appear to be any way around the IQ's secret function. Well, that's the way it should be after all.

**T**he Psion Organiser was the first of the truly portable computers cum personal organisers and over the years it has sold in the hundreds of thousands. It was inevitable that other companies should eventually try to climb onto the bandwagon created by Psion, and while there are now many other contenders they all have to be judged against the original.

The Sharp IQ-7000 is actually smaller than the average filofax - not a bad thing if it's intended to replace it - and opens on a hinge like a book. It's also much more expensive than a paper organiser at £169.99 including VAT. On one side is the keyboard, with more functions than you could shake a church hall at, while on the other is a display screen (94 by 64 pixel, 16 columns by eight lines of characters or 12 columns by four lines of characters) and a touch screen over a slot for add-on cards.

One of the main problems with the Sharp IQ is immediately obvious; those Sharp people have made it to the wrong orientation - it should have had the keyboard landscape instead of portrait. One immediate advantage having a long keyboard rather than a high one would have been to allow for a QWERTY keyboard. I'm sure I'm not the only typist who simply cannot find the keys on an alphabetically laid-out keypad. Well, that's what happens when you let designers decide these things (the same used to be said of programmers but most of them can type now).

Below the LCD screen the card slot has a touch

sensitive screen through which the functions of add-in cards are intended to be used. On the basic machine a protective card is installed with sample functions which merely illustrate those built in. Pressing the cover above each icon produces an illustrative display screen.

The IQ offers a wide range of built-in functions, the kind of thing which would be separated in your filofax by cardboard inserts with labels on. The built-in functions have dedicated keys which are, in order: Calendar, Scheduler, Telephone, Memo, Calculator, World and Home, all of which we shall look at in a bit more detail.

## How do they do it?

There is a lot to learn in order to use the IQ to anything like its full potential. While it's easy to get the individual functions onto the screen, it isn't always very clear how to get them to do what you want. In fact to use it extensively you would really want to have access to the manual most of the time - and that's bigger than a filofax. It would have been better if the help had been available on screen.

The memo function is the easiest to understand. It's simply a way to make short notes, though the software isn't exactly (or even similar to) a word processor; even a Basic programmer would reject it. Notes are stored as soon as the ENTER key is pressed and these are retained in the battery backed RAM while the IQ is off (which can be for up to two years according to Sharp though we haven't tested this claim). Memos can be searched for according to keywords or simply browsed through with the cursor keys.

There are three telephone lists (which you can name) into which you can put names, numbers and addresses. These are really very similar to the Memo function, and in fact you could just as easily use them that way. Similar searches are available under both functions.

More in the business vein, there is a scheduler, aimed at managing your hours as well as your days. This is rather pretty and produces a display suspiciously like a Gant chart for each day's business. This is closely allied with the Calendar function, which displays a monthly calendar - to December 31 2099. However, it can also display a list of dates with scheduler notes attached - much more useful for finding out whether or not you need to get up on any particular day - and why.

The scheduler display didn't seem all that useful. Anyone with the time to sit and put it together can't really be in serious need of organising their day that way. It's more in the nature of an executive toy, as perhaps, is the world clock.

## Tiffin time

The built-in clock will show you the time in your 'home' city, which is initially set for New York; this is easy to change, as is the time itself. It can be displayed in 12 or 24 hour

## Strange but true

The IQ can drive several purpose-built peripherals including a printer, another IQ or a cassette tape deck. The printer is the CE-50P (according to the manual). This is a small, low-power portable thermal printer of the kind Sinclair used to make for the ZX-80. Quite apart from why you might need hard copy on the move (surely the whole point is that you don't?) carrying a 'pocket printer' around is going to spoil the line of your suit.

The IQ can also save data to cassette, thus presenting you with an opportunity to take a giant step backward in computing terms. This doesn't seem a particularly sensible option. It becomes even less sensible when you realise that you need the printer in order to drive the cassette deck (the Sharp CE-152). It would actually prove cheaper (and lighter) to back up data to another IQ; which can be done with nothing more complex than a cable.

format. Working from your home city and the current time there, the IQ will give you the time in hundreds of cities throughout the world. No more guessing whether or not you'll be waking someone up at the other end – now you can be certain to wake them up.

However, be warned, the alarm and schedule times are not reset when the home city is changed so your eight o'clock meeting alarm call set in London won't wake you up at three in the morning in New York. Perhaps it is a good idea after all.

There is a built-in calculator which offers the usual four functions of plus, minus, divide and multiply as well as percentages and square roots. This operates in two modes: either in Calc mode, which is similar to a standard calculator, or in Paperless printer mode.

The big advantage of paperless printing over ordinary calc mode is that five lines of input can be seen – and edited – simultaneously. In fact up to fifty lines are retained and the display can be scrolled using the cursor keys. The answer at the bottom of the screen is 'live' and shows the results of the current state of the calculation; a very nice feature for anyone who ever wondered whether they'd actually put in that first subtraction – or forgotten it?

Below the level of the primary functions lurk a number of more obscure goodies. These are mostly concerned with the way the IQ is set up – which is to say that you can – to a limited extent – configure the way it works to suit yourself.

### Clip art

The Clip function allows you to make a single entry of up to 128 characters taken from any of the other functions. There can only be one clip entry and creating another deletes the first. This could be useful for storing information needed for a meeting, for example.

To get that entry in the first place save yourself some time by putting 'meeting room' in your user dictionary, from where it can be pasted into a memo entry (or anywhere else).

There are a few other bits and bobs that can be done but perhaps the most important is to check the memory. On the basic machine there is only 32k of RAM of which about 26k is usable. All memos, telephone lists, schedules and dictionary words are stored in this RAM, which therefore needs watching carefully.

The IQ is still very new and there is little in the way of add-in cards available yet. The most important of these are cards with extra RAM on but even these add only 32k or 64k to the basic machine. There is a Time/Expense manager card, a Thesaurus/Dictionary and a language translator card and that's it.

There are even more important omissions: of these the most important is the ability to initiate data transfers. The IQ must be controlled remotely from another computer (see Technical talk) but the lack of any kind of programming language is also a liability – even in a machine that claims to be no more than a personal organiser. The question has to be asked; if it's the same size as a paper organiser, does the same things as a paper-based organiser, and isn't as flexible or as easy to operate as a paper organiser, then why buy it? Well it does look smart and it is fun to use.

## Technical talk

Pocket computers seem to be dividing into two camps. There are those that really seem to be trying to sell as peripherals to deskbound computers, and those that seem intended to stand alone. The IQ is heading very firmly in the latter direction.

The problem is that pocket computers can't offer enough functionality to stand alone; to be other than a toy they must be able to interface to a larger computer – not least because of the problems with actually entering useful volumes of data into them.

The low voltage circuits used in the IQ can't produce the +5V and -5V needed to drive the RS232 interface of desktop computers, so Sharp manufacture a level converter (in two forms, one of which needs a mains supply and one that uses power from the RS232). This is intended for the PC but appears to be completely compatible with the PCW. The one we had consisted of the level converter and the necessary connectors for both the RS232 and the IQ.

Getting information in and out of the IQ should be straightforward enough, and involves no more than sending a Control D character (EOT or CHR\$(4)) and a letter. The letter determines whether the IQ sends a directory, sends a file or receives a file. The file structure consists of a 21 byte header, the data and a simple additive checksum.

Although this is very simple to implement (it could even be done in Basic) there is no commercial software to work on anything other than a PC at the moment. However, Sharp are quite happy to supply the information needed to write an IQ link program, as well as the hardware needed (the level converter) to anyone who cares to write and market a link package for your machine.

As an attractive, well styled peripheral to a desk computer the IQ has a lot to recommend it. However, the IQ will inevitably remain unattractive to computer owners who cannot connect it to their main computer. Packages to allow any computer to drive the IQ ought to be a high priority with Sharp and they must appear soon if the IQ is to be taken seriously.



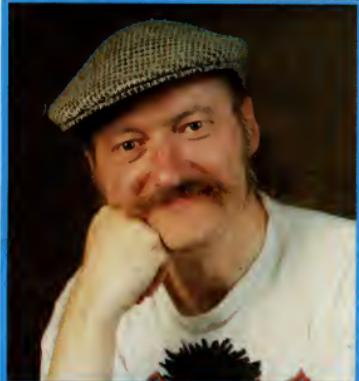
The Sharp IQ-7000 is a real fashion accessory but it would be a pity to see it fade as fast as most fashions. If Sharp fail to make it accessible to more of the people who are actually likely to buy one it will. At the moment the only communications link available for the PC (with one promised for the Mac) which isn't enough

### Price guide

Cards for the IQ will cost you from £50 to over £80, which is pretty steep. The only link package currently available (for the PC) is £99.99. The thermal printer is £109.99 and the cassette deck will set you back £49.95. The cable to connect two IQs together is £17.99.

# SPEAKEASY

Ownership and mastery don't always go together; especially in the computer world. David Wilson tells an awful tale.



David Wilson is a computer consultant working (sometimes) in the border country.

**O**nce upon a time, when the world was young, I spent a year working as a driving instructor. I had many terrifying experiences, but my pupils were aware of at least one thing right from the start – the mere act of buying a car didn't qualify them to be let loose on the road. These days, I make a tenuous living helping the owners of farms and small businesses to computerise their accounts and records. While there's no actual risk to life and limb in buying a computer and plugging it in, I've still seen some pretty hair-raising things done, things dangerous to wealth if not to health. For instance, here's something that happened recently, and it's not untypical. Only the names have been concealed, to protect the guilty ...

The call came when I was out, but the message seemed straightforward enough. A local property agency had 'lost' a vital document. They did their word-processing on an 8512, using Protext – not exactly my favourite combination, but it sounded easy enough to sort out. When I got there, I found that not only was the document corrupted, but Protext itself wasn't working properly. Evidently there'd been some sort of power-surge which had messed up the discs. After a brief but nerve-wracking search, we found the Protext master-discs, and I confirmed that the document was genuinely unreadable.

"We'll have to get it from your back-up discs, then," I said. The reply was a blank look.

### The first lesson

This was the cue for one of my standard little speeches. You know all this already, of course, because you are a sensible 8000 Plus reader – I don't need to tell you that the only truly irreplaceable objects in a computerised office are the data discs. When you take a data disc out of the drive, you should

ask yourself if you would be at all distressed or inconvenienced if the disc flew out of the window, never to be seen again.

If the answer is yes, you should back up the disc instantly. Then, you must ask yourself whether your office is guaranteed proof against fire, flood, earthquake, and hurricane. Usually, the answer to this one will be no, so you should make yet another copy, and store it a good distance away. A nuclear holocaust would still beat your precautions, but data-loss would be the least of your worries ... While I was giving my sermonette, I was hacking at the dud disc with a sector editor, and, happily, was able to restore the document to life, but this isn't always possible.

All right, this was an extreme case. Not many people are quite so foolish, but I get enough emergency work to keep me in Woodbines. What alarms me more than anything else is the way so many people, people who have had the intelligence and ability to build up a business from scratch, seem to lose all their natural good sense and scepticism when they decide to buy a computer system.

### Nuts from him

Perhaps the decision to computerise cost them so much sweat and tears that they didn't have any energy left when it came to making the actual choice of machinery and software. Or perhaps they let a salesman or shop assistant make the choice for them ...

I've told you a tale of horror, but it isn't always like that. An old friend of mine has a small engineering firm, making funny-shaped nuts and bolts for special applications. He's got about a dozen weekly-paid employees, a secretary, and a book-keeper (I used to kid him about the cost of keeping her supplied with quill pens). A computer salesman had called on him, and had come within an ace of selling him a £15,000 mini-system, with the sort of capacity which ICI would have jumped at twenty years ago. I managed to stop him just before he signed the contract, and commanded him to buy a PCW.

"But will it do the job?" he asked.

I made another of my well-rehearsed little speeches.

"What have you got to lose?" I said. "If I'm talking rubbish, you'll have spent £500 on a super word-processor, which will pay for itself before it's out of its guarantee. But if I'm right, you'll have saved enough for the down-payment on that BMW you want."

He's now got three PCWs, two at the office, and one at home. I wish Alan Sugar would pay me some commission. Of course, I don't have to sell you on the virtues of the PCW, gentle reader. I'm preaching to the converted.

Or are you only half-converted? Do you really know all the things a PCW is capable of doing? If you're a regular reader of 8000 Plus you should, but even the vast range of commercial software which fills the advertisement pages is only part of the story.

Over the coming months, I'd like to share with you the things I've learned about what businessmen, doctors, farmers, dentists, and so forth really want – or do I mean really need – from a computer system. If a few million people read these articles, perhaps I'll be able to stop making my little speeches.

# And now, a **FLIPPER** that works with Isenstein memory boards too.

**FLIPPER 2** was quite an unusual program. It could split your PCW's memory in two, letting you run LocoScript 2 in one half and a CP/M program in the other. Or it could let you load two CP/M programs at once, one in each half. It could even tackle tricky programs like Mini Office and LocoFile. Best of all it could FLIP you from one half to the other in as little as two seconds, any time you wanted. And it wouldn't lose your place.

Things have changed since we launched **FLIPPER 2**. Now you can buy an Isenstein Ramdrive Card and double your PCW's memory size. Soon there may be other memory boards on the market, giving you anything up to 2048K of memory.

That's why we've brought out **FLIPPER 2 PLUS**. This still gives you all the memory-splitting power of **FLIPPER 2**, but it can handle extra memory as well. (As much of it as you want to plug in, in fact.) This means that, with an Isenstein 512K expansion fitted, **FLIPPER 2 PLUS** can cram two (very nearly) full-size 8512s or 9512s into one machine. Not bad, eh? And we haven't even put the price up.

Please send me **FLIPPER 2 PLUS** for my:

8512  9512  Expanded 8256

I enclose a cheque/postal order for £29.95  
 I enclose my FLIPPER/FLIPPER 2 masterdisk and a cheque/postal order for £5.00

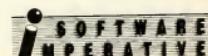
(Price includes UK postage and packing, and VAT. Please make all cheques payable to Software Imperative. Sorry, **FLIPPER** does not run on an unexpanded 8256.)

Name .....  
Address .....  
Postcode .....

Mail this coupon to: Software Imperative, 11 Chapel Row,  
Queen Square, Bath, Avon, BA1 1HN

## **FLIPPER 2 PLUS: still only £29.95.**

Software Imperative, 11 Chapel Row, Queen Square, Bath, Avon, BA1 1HN, proprietor A.J.Wilton, tel (0225) 425315. PCW is a trademark of Amstrad plc. CP/M is a trademark of Digital Research. LocoScript and LocoFile are trademarks of Locomotive Software. Mini Office is a trademark of Database Software. Isenstein is a trademark of Isenstein Computer Systems.





# CORNIX SOFTWARE

BUSINESS MADE EASY

## *Simple Accounts II*

Genuinely easy to use book-keeping system - featuring:

- \* Full Audit trail
- \* Monthly and year to date totals
- \* Full bank/cash reconciliation
- \* Part payments catered for
- \* In depth analysis facilities
- \* Creditors and debtors report
- \* Full vat accounting
- \* 100 page ringbound manual
- \* Indefinite FREE user support.

Amstrad PCW format £99.95

## *Card-Index*

Useful and simple filing system:

- \* Genuinely easy to use
- \* Powerful search and sort
- \* Range of print formats
- \* Ideal for mailing labels

Amstrad PCW format £34.95

## *Job Estimating*

An essential tool for the small contractor:

- \* Holds a library of component parts
- \* Performs all calculations
- \* Full control over quoted prices
- \* Comprehensive analysis
- \* Prints full estimates or quotations
- \* Reports your profit
- \* Maintains latest cost prices.

Amstrad PCW format £79.90

## *Product Costing*

Invaluable for use by manufacturers in costing products:

- \* Reflects changes in component costs
- \* Automatic update of production costs
- \* Comprehensive analysis of costs
- \* Reports your profit

Amstrad PCW format £79.90

## *NEW - Cornix Invoicing*

Our latest product for the small business market. Cornix Invoicing offers an efficient solution to the problems of producing and recording invoices:

- \* Stores up to 200 regular customers
- \* Will operate on five vat rates
- \* Automatic numbering - in sequence
- \* Handles blanket & settlement discount
- \* Shows invoice and delivery address
- \* Comprehensive invoice analysis
- \* Holds up to 1500 'stock items'
- \* Prints on headed or plain paper

Amstrad PCW format £59.95

Full specification manuals are available FREE upon request on any of the products mentioned.  
We are so confident that our programs are easy to use - we offer INDEFINITE FREE USER SUPPORT

**Cornix Software (sales) Ltd.**

40b Queen Street, Hitchin, Herts. SG4 9TS

Telephone: (0462) 422232

**DEALER ENQUIRIES WELCOME**

# A PARTNERS' TALE

Sharon Bradley visits a training company in Bournemouth who are outward bound and gaining ground – every minute!

**F**ive minutes spent in the company of Sue and David Rogers are enough to convince you that this couple have really got their act together. The term 'joint venture' is one that repeatedly crops up in their conversation; at times, it's difficult to know whether they're talking about their alliance with publishing companies and language schools or their own highly successful marriage and business partnership.

For in just four years, Sue and David have built from virtually nothing a computer training company that is set to become a force to be reckoned with – not just in this country, but overseas as well. Of course, 'virtually nothing' is, perhaps, a trifle inaccurate; Sue had almost twenty-odd years' experience of technical teaching under her belt. Husband David on the other hand, an ex-builders' merchant, had accumulated many years' worth of experience on running multi-branch operations by the time the initial idea to go it alone was born.

### Physician, heal thyself

Sue had been teaching word processing for five years at a nearby secretarial college in Bournemouth when she first had an inkling of the yawning chasm that then existed in the market for good, structured computer training. 'She was becoming more and more disillusioned trying to teach people who didn't want to learn,' explains David. 'Most of her students belonged to one of two categories: either they were poor little rich girls whose fathers had enrolled them on the course because they didn't know what else to do with them, or they were YTS kids. Neither group wanted to learn.'

She decided to give up teaching completely and earn her living doing secretarial services from home.'

Sue's father one day presented her with the springboard she needed to get her new venture off the ground: a complete word processing system that didn't cost two and a half thousand pounds - in the guise of an Amstrad PCW. It was this humble and unassuming machine that unwittingly provided the original inspiration for what was to follow.

Sue takes over the story: 'Once I'd got the machine, I didn't find LocoScript as straightforward as I'd thought I would – and I'd been a qualified word processing teacher for three years. If I was having trouble, there were bound to be more people out there having an even tougher time of it.'

On David's suggestion, Sue decided to sell the notes she had been making to get herself through the software to other people. Once she had learnt the package more



Husband and wife team David and Susan Rogers proving that software training has no boundaries

thoroughly, it seemed a natural enough progression to go on and advertise her personal training services through the pages of the local newspaper. 'By the following February we'd drummed up enough interest in the training – which up till then I had been doing at evenings and weekends – to make giving up a full-time job worthwhile. The business more or less took off from there.'

After about a year of going it alone, David, who had hitherto been standing on the sidelines, began to assume an increasingly indispensable role in the company - at that stage known as Velda Training - until his contribution became continuous.

'We had 11 computers running from home this time last year – including two in our bedroom!' jokes David. The couple decided to register the growing business as a limited company, changed its name to Computer Training Centres (UK) Ltd and, finally last January, moved into attractive new premises five minutes' walk from the Bournemouth seafront.

### Programmed for success

Since then the company has gone from strength to strength and now manufactures training courses in up to 35 different programs – from word processors to spreadsheets, accounts packages to databases. Even though CTC



## DIY Publishing

If you're wondering why the name of Susan Rogers sounds roughly familiar, that's because we've featured a couple of her LocoScript training guides in our Book Look pages at various times in the past: Looking into LocoScript 2 (November 88, p45) and Easily Into LocoScript for the Amstrad PCW 8256/8512 (September 89, p39).

Not content with present endeavours, Sue and David would one day like to be publishers in their own right. That, however, takes time and money. For the moment, Sue and David go as far as they possibly can on their own with the books that they create. 'We write and typeset them ourselves; all the publisher does now is to print them. Until the time comes when we can go the whole hog by ourselves, we are happy to work hand in hand with an excellent publishing house like Prentice Hall who have commissioned us to write a series of "Looking into" titles.'

has branched into software specific to other machines, Sue reckons that LocoScript 2 still counts for over a third of their training requests.

The couple are anxious to stress that they are, whenever possible, market-driven. 'We always try to satisfy a need,' maintains David. 'If someone phones up asking for training on a particular piece of software and it's not a package that we cover, then we'll make a note of it and see how many others ask for it. If the same request keeps cropping up we'll decide to do it. We buy the program and the trainers will then go away and spend up to six weeks getting into the program and writing the training courses.'

All of CTC's training material is written in-house by Sue and the other trainers. 'We never stop,' she says. 'If we're not training, we're writing. And, of course, all the material that we write must incorporate those techniques that have been tried and tested in my published guide-books.' In addition to conforming to that highly successful formula, the training material for each program that the company covers is prepared in three different ways, depending on how it's going to be delivered: on a one to one basis, in a group, or on-site with one of the company's mobile trainers.

The main difference between the Rogers' in-house training methods and those of other training companies is that their courses are not 'fixed' to run over predetermined periods – like a college. 'Our courses,' says Sue, 'are tailor-made to the clients' requirements. In most cases they can have the training immediately. Only in very unusual circumstances will they have to wait – and even then it will only be for the trainer or a training-room.'

Unfounded accusations of cowboy dealings have been levelled at Sue and David in the past. On what basis, we enquired?

## Home and away

'Some people,' explains David, 'have found it difficult to take us seriously because of the prices that we charge. Let me give you an example. For six hours of on-site training on a one to one basis in the centre of London, we will charge £150 plus travelling expenses. Other companies we could name charge nearly £300 for the same thing. There's a definite rip-off element in training: for some reason, people assume that it has to go over at a very high price. It's a load of nonsense.'

The Rogers training is cost-effective relative to the price of the machine. As Sue rightly points out, who is going to want to spend £300 on a day's LocoScript training when they've just forked out £400, £500 on their PCW? CTC 'deliver lean', as David puts it, and they know how to do it well.

CTC (UK) Ltd have sprinkled liberally across southern England a whole fleet of freelance mobile trainers whose task it is to deliver on-site training to corporations and individuals in need of software expertise. Sue and David are now busy recruiting new trainers further up so that by December they will be fully operational as far north as Liverpool. By April of next year they hope to be staking their claim on the other side of the Scottish border.

One of the most important pieces of equipment that each member of the mobile fleet must possess is a Fax machine. 'Each of our trainers,' explains David, 'will operate a franchise which amounts to their local yellow pages territory. We will be taking care of all their administration – bookings and so on – down here in Bournemouth and will be Fax-ing all their assignments to them. If they hit some kind of problem while they're out on-site, they call us. One of our trainers will always be here to answer their calls. We get to work on the problem, telephone the answer to the client and Fax the answer to the trainer who is by this stage busy on the next assignment.'

Right from the beginning it has been the Rogers' intention to carry their training techniques further afield than the UK. That's why they devote so much of their time to developing the training material. Its role in the international expansion of the company is crucial. At present, the couple are putting all their energies into getting a major joint venture off the ground – this time in Abu Dhabi.

## Home and away

Recently the Rogers have taken on board a new partner who operates a series of English Language training centres at home, overseas and – of course – over there. They are preparing to combine forces. 'Already he has the translators and the trainers ready and waiting,' says David. 'It's now just a question of getting the course material to him so that it can be translated.'

It's not quite as easy as that though; for while David is the first to acknowledge that women make better trainers, the Middle East is not perhaps the best environment in which to place one. Instead, their local CTC operator must

recruit male trainers and send them over to Bournemouth for up to two months' intensive software and technique training. At the end of that time and armed with the necessary material, they should be ready for 'reimplanting' in their home surroundings. The aim is that as well as receiving their formal English Language training, large Middle East companies like FIAT can also profit from the latest Western software training.

It's certainly a very ambitious project. 'We would like,' says David, 'a franchise inside the UK and use this building purely as a base – for research, development and eventually for the training of trainers. We're not trying to end up with a fifteen-storey office block in Bournemouth with CTC blazoned across the front; if that does happen, then we've failed in what we are trying to achieve. We're interested in working with overseas people on joint ventures.' By the end of next year, the couple hope to be operating from eight centres in Europe, six in Malaysia and three in the Middle East by the end of next year.

So what's the secret behind the Rogers' success? Sue and David exchange secretive smiles. 'Definitely the au pair,' says Sue. 'Without her there's no way we could function. We both work full time, ten hours a day, seven days a week. What would we do without her? ■

If you think Computer Training Centres UK Ltd can help you talk to either Sue or David on 0202 299676.

## Child's Play

During the school holidays, CTC offer word processing, database and spreadsheet training courses for over eleven years old. The tutor-led in-house classes which run three mornings a week have so far proved very popular. 'Unfortunately,' says David, 'we get many more boys than girls.'

## PCW Pride

Perhaps not surprisingly, the company's training efforts have gradually shifted to cater more for the PC software market. Although PCW-specific training is by no means extinct, it tends to be the small-businessman more than anyone else who requires the company's services.

'Having said that, the PCW,' says David, 'is a much under-rated machine. It's capable of doing a lot more than people generally give it credit for. One gets the feeling that those who sell them aren't pushing them hard enough – perhaps because the profit margins aren't there on them. Or maybe they themselves don't realise exactly what the machine is capable of doing.'

'Either way,' says Sue, 'even though we have our choice of PCs, we prefer to run the whole business on the PCW – databases, spreadsheets – the works. Just like we've always done. It's a versatile machine, we all know it inside out and the output is always nicely finished off. What more could we ask for?'

Originally Sue and David would produce their training material in-house on their trusty PCW to send to LocoScript-learning markets in Australia, Holland and Belgium.

'In fact,' says David, 'there probably isn't a single country this side of the Iron Curtain that we haven't sent one to.'

## Package deal

Although the company offer training in up to 35 packages, there is, says Sue, a nucleus of programs that people come back to again and again. They are LocoScript, Word Perfect, Word Star, Professional 5, Lotus 1, 2 and 3, SuperCalc 2, 3 and 5 and finally Sage Accounts.

# DISCOUNT SOFTWARE FOR THE PCW 8256, 8512 & 9512

## HARDWARE

5.25" DISC DRIVES	
We now stock 5.25" fully compatible disc drives for the PCW range. They are directly addressed by CPM and require no extra software.	
PCW 8256 & 9512	
5.25" drive.....	£139.95
PCW 8512	
Switchable drive.....	£159.95

## WORD PROCESSING

Tasword 8000.....	17.95
Taspript 8000.....	10.95
Taspell 8000.....	11.95
Tas Sign.....	23.95
Locoscript 2.2.....	21.95
Locoscript 2 + Locospell.....	31.95
Supertype II.....	12.95
Protext Filer (needs Protext).....	21.95
Protext Office (needs Protext).....	29.95

### MJC SPECIAL:

PROTEXT CPM FULL VERSION  
including Spellchecker & Mailmerge  
**RRP £59.95 OURS £39.95**

## DATABASES

Masterfile 8000.....	34.95
At Last Plus.....	27.95
Comix Card Index.....	29.95
Minerva First Base.....	25.95

## TUTORIAL

German Master.....	15.95
French Mistress.....	15.95
Italian Tutor.....	15.95
Spanish Tutor.....	15.95
Iansyst Two Finger Typing.....	19.95
Iansyst Crash Course Typing.....	19.95

## SPREADSHEET/PLANNING

Supercalc 2.....	44.95
Minerva First Calc.....	25.95
Money Manager PCW.....	39.95
Stockmarket (Share analysis).....	32.95
Comix Simple Accounts II.....	79.95
Plan-It (personal planner).....	15.95
Job Estimator.....	69.95
Product Costing.....	69.95
DG Payroll.....	29.95
Comix Invoicing.....	49.95

## DESKTOP / GRAPHICS

Desktop Publisher.....	19.95
Desktop Publisher + AMX Mouse.....	59.95
Stop Press Software.....	34.95
Stop Press + AMX Mouse.....	69.95
Micro Design 2.....	54.95
Micro Design 2 + AMX Mouse.....	95.95
Masterpaint.....	15.95
Masterpaint + AMX Mouse.....	59.95
* AMX + Interface.....	only 47.50
AMX Desktop + AMX Mouse.....	64.95

*(For Stop Press, Desktop Publisher, Masterpaint, Micro Design and others)*

## GAMES

Clock Chess '89.....	15.95
Classic Games 4.....	15.95
Head Over Heels (not 9512).....	CALL
Corruption.....	19.95
Trivial Pursuit.....	15.95
Scrabble.....	CALL
Tomahawk.....	15.95
Clock Chess '88.....	12.95
Matchday II.....	CALL
Batman (not 9512).....	CALL
Time & Magik.....	11.95
Lancelot.....	15.95
Strike Force Harrier.....	15.95
Fish.....	19.95

## BOOKS

Protext: A PCW User's Guide.....	9.95
All In One Computing (Hughes).....	11.95
Program Your PCW.....	7.95
PCW Basic 2 (Mallard Basic).....	9.95

## PRINTER RIBBONS

PCW 8256 / 8512 Fabric 14m.....	3.95
x 2.....	7.00
PCW 9512 Genuine Carbon.....	3.95
PCW 9512 Fabric Multistrike.....	2.95

## MISCELLANEOUS

PCW 8000 Dust Cover Set 3pc.....	9.95
PCW 9512 Dust Cover Set 3pc.....	10.95
8 Series Printer Ext. Lead 1m.....	11.95
9 Series Printer Ext Lead 1m.....	12.95
1000 Fanfold Labels.....	6.95
3" Disc Head Cleaner.....	6.95
9512 Daisywheels All at £5.95	

Rector (10).....	Courier (10)
Script (12).....	Orator (10)
Prestige Elite (12).....	Thesis (Prop)
Letter Gothic (10/12) Mini Gothic (15)	

## MINI OFFICE PRO+

New updated Mini Office with free

RRP.....	£49.95
OURS.....	£32.95
For 9512 or 9512 only at time of going to press	

**8256 owners please call**

Amsoft or Maxwell CF2 Discs*	
£25.95 for 10	
£14.00 for 5	

\* as available

All prices INCLUDE VAT, postage and packaging  
Overseas orders welcome - please write for prices

## MJC SUPPLIES PLS

40a QUEEN STREET, HITCHIN, HERTS, SG4 9TS.

Tel: (0462) 32897 / 420847 / 421415 for Enquiries / Credit orders  
CALLERS WELCOME Mon to Fri 9.30 - 5.00, Sat 10.00 - 4.00



## ALL OUR PRICES INCLUDE VAT

### UNBEATABLE OFFER ON CF2 DISKS

### FREE 3" CLEANING KIT WORTH OVER £5.00 WITH EVERY ORDER

MAXELL 3" CF2 DISKS (uncased)	
10.....X	£22.90
20.....X	£22.50
30.....X	£22.00

### MAXELL 3" CF2 DISKS (in plastic case)

10.....X	£24.95
20.....X	£24.50
30.....X	£24.00

### MAXELL BULK 100% certified (includes FREE THINGI Copy holder and FREE 3" Cleaning Kit worth over £10.00)

50.....X	£100.62
100.....X	£195.50
200.....X	£379.50

GOODS ARE DESPATCHED SAME DAY IF IN STOCK - POSTAGE NORMAL POST OFFICE RATES ACCESS AND VISA WELCOME.

TEL 051 639 7900 TRADE ENQUIRIES WELCOME  
**LITTLE OFFICE COMPUTER PRODUCTS**  
The Business Centre, Claughton Road,  
Birkenhead, L41 6EY.

## A SMALL SELECTION FROM OUR WAREHOUSE

### Hardware & Peripherals (Offers while stocks last)

	RRP	WAVE
Fision Organiser II LZ	149.15	127.46 C
Amstrad PCW8256 Computer/Word Processor	401.35	361.22 ANC
Amstrad PCW8256 Computer/Word Processor	516.35	456.22 ANC
Amstrad PCW9512 Computer/Word Processor	29.95	26.77 ANC
Amstrad PCW9512 Computer/Word Proc. with Sheet Feeder	573.85	516.47 ANC
Amstrad Automatic Sheet Feeder - PCW9512	113.85	96.77 C
FD-4 2nd 3" Disc Drive - PCW9512 (Genuine Amstrad Drive)	171.35	156.66 C
Amstrad CPS8256 Serial/Parallel Interface - PCW	68.94	44.81 D
MCL391 Lead, CPS8256 to Parallel Printer (Round Cable)	14.95	.89 E
PL2 Lead, PCW8256 to Parallel Printer (Round Cable)	19.95	.68 E
Star LC10 10 Port Parallel Printer	297.85	152.74 A
* = Amstrad Service Exchange Spares Available - Phone for Prices * *		
20MB Amstrad Hard Disc and Network System Including	2500.00	1025.00 ANC
Interfaces for CPC & PCW (Very Limited Stocks)	573.85	516.47 A
Vortex System 2000 40MB Hard Disc in PSU, Fan, ULL - PCW	79.95	55.96 D
Database Master Pack (Master Scan + Paint) - PCWB256/8512	49.95	45.16 D
Amstrad PC Upgrade Chips set of 8 - PCWB256	12.65	.5 E
Print Kit for PCW9512	3.99	F
2727PFN Ribbon Fabric - Epson FX800/FX800LX800	PKT 2.1.10	1.98 F
2746MS Ribbon Multisize - PCW9512	PKT 2.1.77	.42 F
2741FN Ribbon Fabric - PCWB256/8512	PKT 2.1.98	.50 F

### DO YOU WANT TO SAVE MONEY, THEN SEND FOR OUR TRADE PRICE LIST

(State for which products and enclose 3 x 20p stamps)

### Blank Discs & Software

CP Software Bridge Player 2150 "Galactica" - PCW	29.95	22.46 E
Database Mini-Office Professional Plus - PCW	49.95	32.47 D
Public Domain Games Disc 1 (7 Games) - PCW	5.99	.449 F
Campbell Systems Masterfile 8000 - PCW	49.95	34.97 D
Loopscrip 2 + Loopscrip 2 Pack - PCWB256/8512	34.90	24.78 D
Amstrad 3" Discs DS411 3" Drives	Box 10	29.90 - 20.63 E
Maxwell 3" Discs DS411 3" Drives	Box 10	29.90 - 20.63 E
AM5201, 2.25" DS400 40MB Bulk Discs C/W Labels	Pkt 25	57.27 - .736 D
AM5201, Storage Box Holders 15/Cards 30/Unsealed 3" 1 NEW		14.95 - 9.72 D

### CAPTAIN CAVEMAN BBS NOW ON LINE 24 HRS MON-SAT 0229-473609

Eng. Mainland post & ins. (A) £5.75 (B) £4.60 (C) £3.45 (D) £2.30 (E) £1.15 (F) 50p (ANC) 3 Day £10.35 Next Day £12.50, 2 Day £15.00, 24hr £20.00, 48hr £30.00, 72hr £40.00 per 20p £5.00.

All Prices include VAT. All sales subject to our Trade Terms of Trading.

**W.A.V.E. (Trade Dept. 80001189)**

Walnay Audio Visual & Electrical Distribution

1 Buccleuch Street, Barrow-in-Furness, Cumbria, LA14 1SR  
Tel: 0229-870000 (6 lines) Hours: Mon - Fri 10.00-5.00

## INBUSINESS PCW from cavalier software

8 Lausanne Road, London, SE15 2HU

*The complete integrated stock control, invoicing and full accounting system for the AMSTRAD PCW. Suitable for retailers, wholesalers, builders, accountants and almost any other small business*



**CAVALIER  
SOFTWARE**

PO BOX 32, LONDON  
SE15 2HS

### INBUSINESS MENU

- A. Simple Invoicing
- B. Stock Control
- C. Retail Stock Control & Labels
- D. Order Processing & Invoicing
- E. Customer/Supplier Database
- F. Nominal Ledger
- G. Retail Cash Accounting
- H. Sales Ledger
- I. Purchase Ledger
- J. Period-end Accounting & Audit
- K. Report Generator
- L. Contract Accounting

PLEASE MAKE YOUR SELECTION

### PRICES (including VAT)

Simple Invoicing	(menu options A & E)	34.95	
INSTOCK II	(menu options B to E)	74.95	
INTACT II	(menu options E to J)	74.95	
Report Generator	(menu option K)	14.95	Requires INSTOCK II
INBUSINESS PCW	(menu options B to K)	149.90	
Contract Accounts	(menu option L)	59.95	Requires INTACT II

### WE ALSO PROVIDE THE FOLLOWING SPECIALIST SYSTEMS:

TELEADD	(Name & Address database ideal for home, club membership etc.)	29.95
HOMEVIEW	(Estate Agents matching & mailing systems)	195.44
DINER	(Restaurant and Fast food Menu, Stock and Billing System)	59.95
NEWSBOY	(Newspaper & Paper Round & Billing System)	59.95
RE-CHORD	(Music Library Database)	29.95
HOTEL	(Hotel Reservations & Billing System)	99.95

All options are menu driven, so are simple to operate.  
An Installation Program is provided for all AMSTRAD PCW computers.  
All carry free lifetime HOTLINE support and require no disc swapping.  
All programs fully integrated with all other programs, so you can buy a single module to start and when you are ready, add further modules to provide a complete business system.

Lifetime  
Support

No Disc  
Swapping



Tel: 01-639 6683 for more details or to place your order



# DAISY ANSWERS

Larry Whitlow gets to grips with foreign printwheels on the 9512

So you're a multi-lingual whizz-kid, and you want to show off your command of other people's native tongues to prove it? You know how to communicate with a German bicycle manufacturer or a French polisher in his native language; or maybe you just want to impress the world with your knowledge of Greek but – your PCW daisywheel printer can't cope.

What to do next? Relax; while it may not be as easy as falling off a log it's perfectly possible to persuade the PCW 9512 to speak like a good European.

If you have to type in a foreign language on the PCW 9512, whether it is a document, letter, reference or even a name and address you inevitably find that there are a number of characters in that language which are not part of the English alphabetic character set. These characters can be typed – but to print them it is necessary to acquire the relevant language program as well as a printwheel bearing the correct characters. If the language is French then all that is necessary is to insert the Swiss/French printwheel, and change the printer settings in the 'Document set up' menus to the Swiss/French printwheel, and the French characters can be printed.

This simple approach doesn't apply to other foreign printwheels; you must also install the software that defines which characters are included on the printwheel and on which petal they are located. The character set files, as they are known, for other foreign languages are obtainable on the Printwheels disc from Locomotive Software (priced at £14.95).

These files can only be installed in version 1.2 or later of LocoScript 2, but version 1.6 is supplied free with the Printwheels disc. With this disc it is also possible to create character set files for any language printwheels which may become available at a later date.

Even with the foreign print-wheel and the appropriate character set file, you still have to use the key combinations given in Appendix III of the User Manual to type the characters you want. For example to type ü with the German printwheel, it is first necessary to type [EXTRA]W, to get the accent ", then u to obtain the accented character ü. Even though the accented character ü is actually to be found on a petal of the German printwheel, the character does not exist as a separate character on the print-wheel.

With the exception of Greek, all the printwheels have about 80 common characters – the alphabetical and punctuation characters. They do not all occur in the same place on the printwheel. Because of the different positions of the characters on foreign keyboards, it is essential to ensure that the printwheel matches the character set displayed before printout. If this is not done, then some of the characters will be printed wrongly or may be missing.

## Key facts

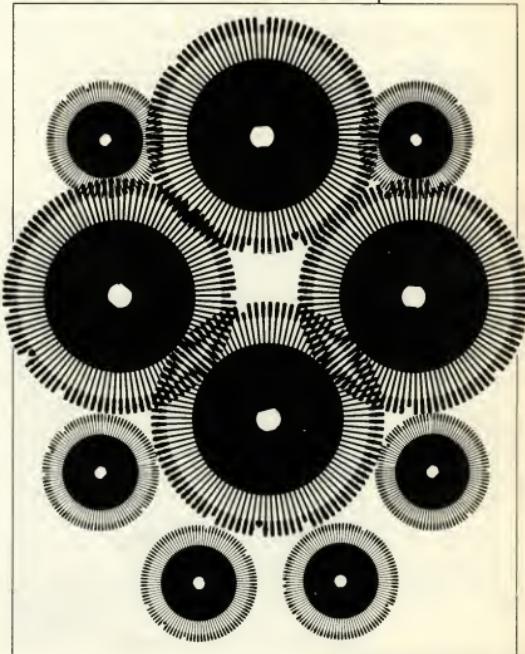
When LocoScript is being used and a key, or combination of keys, is pressed; the character corresponding to this key or keys is looked up in a 'keyboard table', which then inputs this character into the document being

## Bespoke keyboards

If you want to obtain accented characters using a single keystroke on the main keyboard, or on a different keyboard layout to correspond to a normal foreign typewriter layout, or even to use a foreign layout like the French AZERTY keyboard – then the programme KEYBOARD.JOY in the Systems Group on the LocoScript Start of Day disc must be modified. This is done by using the LOCOKEY disc, which is also available from Locomotive Software.

This is a simple but tedious operation. Using two cursors similar to those used during 'Disc Management', select the characters from an array of all the LocoScript characters displayed on the screen, and then paste them on to the appropriate keys in a representation of the keyboard, which is also displayed on the screen.

It is also possible to superimpose one character on top of another, for example, to produce an accented character from an alphabetical character and a separate accent. All the keyboard options, [EXTRA], [ALT], GREEK, SYMBOLS and CYRILLIC, can likewise be designated with whatever characters or combination of characters are present on the printwheel. This operation produces a new keyboard file which is labelled LOCOKEY.JOY. This is then used to replace the copy of LOCOKEY.JOY present on the LocoScript start of day disc.



**In style**

The combinations of alphabetical, numerical and punctuation characters are referred to as 'Character Sets', and since they are each associated with a particular language they are designated by the names of the countries, for example England, Germany, and so on. The only exception is the Ascii Character Set. The different typefaces and pitches used with these character sets are referred to as 'Character Styles'. They are designated according to the typeface and the pitch, for example COURIER 10 and SCRIPT 12.

prepared. This 'keyboard table' is loaded to the System group of the drive M from the Systems group on the LocoScript start of day disc during loading. Thus while it is possible to have several keyboard files, there can only be one LOCOKEY.JOY file in the Systems Group.

For another keyboard layout there must be either a separate start of day disc with the appropriate LOCOKEY.JOY file, or alternatively, the new keyboard file is stored on the disc with another filename. If you need to use more than one keyboard layout this second version can be copied into the systems group when required, to replace the original keyboard file as LOCOKEY.JOY. Unfortunately the system then has to be reloaded before the new keyboard file can be used by pressing [EXTRA][SHIFT] AND [EXIT] at the same time.

This means that in addition to having to swap keyboard files and then reload, it is virtually impossible to use more than one keyboard layout in the same document. There is, however, a way of overcoming this disadvantage, which is to make fuller use of the GREEK, CYRILLIC and SYMBOLS keyboards, which are selected by [ALT][I3], [ALT][I5] and [ALT][I7] key combinations respectively.

There are also two other keyboards, [ALT] and [EXTRA], but the [ALT] or [EXTRA] key must be pressed at the same time as the character keys. In addition they each have their own particular disadvantage. The [ALT] keyboard only functions as an additional keyboard when the main keyboard is in the normal or default mode - which means the standard English keyboard.

If the main keyboard is in any other keyboard mode selected by [ALT][I3], [ALT][I5] or [ALT][I7] the [ALT] keyboard returns the characters corresponding to those of the main or default - English - keyboard. The disadvantage with the [EXTRA] keyboard is that it does not have 'shifted' characters - there is only one character associated with each key and the [SHIFT] keys have no effect. Clearly these two keyboards can only be used for characters which are not often required.

Getting to grips with the problems caused by the relative inflexibility of the daisylwheel - as compared with the dot matrix printers - presents a few initial difficulties but the effort involved opens up new areas for the PCW 9512. ■

**Supply side**

Two suppliers we know of who stock foreign language printwheels for the 9512 are: Walney Audio Visual, 1 Buccleuch Street, Barrow-in-Furness, Cumbria LA14 1SR on 0295 870000 and Microbridge, Kettlestring Lane, Clifton Muri Industrial Estate, York YO5 8XG on 0904 660617.

## Installing the character set file

1. Load LocoScript 2 (this must be version 1.2 or later)
2. Insert PRINTWHEELS disc and press [I7]
3. Copy the character set files PCW9512.4XX, where XX denotes the language, into Group 0 Drive M
4. Insert start of day disc and press [I7]
5. Copy the character set files from Drive M to Group 0 Drive 1
6. Press [F6] for Settings menu
7. Select For Character Set and press [ENTER]
8. Select one of the new character sets and press the Set key [+] followed by [ENTER] to return to the main menu.
9. Select Character styles to set any other character styles for the language selected.
10. When this has been done press [ENTER] and repeat steps eight and nine for each new character set file.
11. When all the required character styles for the new printwheels have been entered press [EXIT] followed by [ENTER]
12. The option is now there to write all the new character styles in SETTINGS.STD, to make these character styles permanently resident in the SYSTEMS group.

## Keying in tongues

Let us assume you need to use English, French, German, and/or Greek characters; and the keyboards have been arranged by means of the LOCOKEY program to give the required keyboard layouts. The default keyboard layout - [ALT][I1] - is retained for the English character set, with all the characters being the same as the characters engraved on the keys. The [ALT][I3] keyboard is used for the Swiss-French characters set, the [ALT][I5] keyboard for the German character set, and the [ALT][I7] keyboard for the Greek character set.

With the French and German [ALT][I3] and [ALT][I5] keyboards, the accented and additional alphabetical characters peculiar to these languages have been placed on the associated keyboard, and some of the English characters which only occur on the English printwheels have been replaced by characters which occur in these languages, for example (§) in place of (@) for both these keyboard layouts.

For English and the two main foreign languages, the keyboards correspond to the alphabetical, numerical and punctuation characters which are engraved on the keys. The two right hand keys of each of the two centre rows of the keyboard have been used for the accented and additional characters in the foreign languages. The characters from these four positions have been transferred to the [EXTRA] keyboard, although not all of them are available on the foreign printwheels. Since the German printwheel has no pound character this has been replaced by the percent sign, which is unique to the German printwheel.

The square brackets [], the angle brackets <>, the vertical line | and the hash sign # have been transferred to the [EXTRA] keyboard, but they are also available in their normal place on the English keyboard. Some of the additional characters such as the superscripts 2 and 3 and the degrees sign have also been located on the [EXTRA] keyboard. In addition some of the accents and accented characters have also been placed there since they are sometimes available in some languages in which they are not part of the national alphabet.

In fact, these characters were defined on the [EXTRA] keyboard in LOCOKEY specifically for a particular language. For example, the umlaut (ö) occurs on the Swiss/French printwheel, and so this character and the umlauted characters ü and å which occur on the main German keyboard - [ALT][I5] - and also occur on the [EXTRA] keyboard when it is used in conjunction with the German printwheel. Likewise any characters which have been defined in the [EXTRA] keyboard set which do not occur on the printwheel in use will print a space.

## Next month

When characters from more than one language set are required in the same document, problems crop up. You have to change the printwheel while printing out a document, a requirement which is not provided for in LocoScript 2. It is possible to overcome this difficulty. Various methods of using different printwheels in the same document will be described in the next issue.

# CONNECT

## Software Ltd

### What users say about Money Manager - 3

I have been very pleased with the program. In fact it is an indispensable part of my business. My accountant is pleased and I'm sure it saves some of his fees due to the reports etc that I can give him. It's incredible that it can be so good at this price.  
(L.P. - Walsall)

Having installed the program, without the difficulties which I normally expect from a new program, may I confirm my delight in its operation.  
(R.B. - Warrington)

I have been using Money Manager for about 2 years. I keep our office accounts and holiday letting accounts on file using the system and have only praise for its ease of use.  
(P.I. - Southwold)

I am writing to congratulate you on Money Manager. As a semi-retired accountant working from home I find it ideal for production of clients' accounts. I feel that this excellent program has never received the praise it is entitled to in the computing magazines and hope one day to write on an article emphasising just how invaluable I have found it.  
(H.B. FCA - Bristol)

I received Money Manager 12 days after ordering it, which I think must be a record for execution of a software order at this distance. Thank you so much for your superb service. I can already see that the program is at least all you claim for it, and thus will improve the quality of my accountancy (and hence of my life) markedly.  
(J.S.T. - New Zealand)

I have found the Money Manager a boon to me, particularly with the VAT.  
(R.B. - Glastonbury)

I have had one or two disappointments with software programmes since buying a computer four months ago, but your Money Manager was not - my thanks.  
(R.B. - Northants)

I just had to write to congratulate you on yet another excellent upgrading of the Money Manager program. Since I received the upgrade last week, I have been able to improve my accounting even more than before - the Calculator and Macro functions are so helpful. The original Money Manager was good, Money Manager Plus was great but this is the best yet! Congratulations also on another first class User Manual which makes the program a joy to use.  
(J.P.K. - Cardiff)

I thought I would just drop you a line to say that I think your Money Manager is a bonny program. It suits our modest-sized business purposes splendidly, and copes elegantly with a whole range of our requirements.  
(J.M. - Norfolk)

May I take this opportunity of complimenting you on the Money Manager program. It is certainly the most cost effective piece of software I have bought and is used at least twice a week for the church accounts.  
(A.J.C. - Macclesfield)

I find that I use the Money Manager program at least once a week to keep track of my UK accounts and my Brazilian cruzado account which is beset with inflationary numbers. Because this financial control is regular, I find your program is essential for my personal financial management.  
(D.G.S. - São Paulo)

I have recently purchased a copy of Money Manager and I am very impressed. It represents some of the best value for money I have ever seen, and has obviously been written by someone who actually uses a computer rather than a mere programmer.  
(R.T.B. - Sheffield)

Only  
**£49.95**  
including VAT and p.p.

Suitable for the Amstrad PCW 8256, 8512 and 9512

## MONEY MANAGER PCW

**NEW!**

Now even  
more powerful, more  
friendly, and more useful!!

### Control your finances the easy way!

#### Be your own accountant!

Money Manager PCW provides individuals, businesses and professional people with a simple yet powerful way of managing their financial activities. All transactions can be entered easily and then presented in a wide variety of reports, ranging from a detailed listing of expenditure for tax purposes to summaries showing, for example, how much money has been spent on petrol or phone bills in a chosen period. Reports can be printed as text, sent to a datafile for further processing or presented in graphical form.

The program includes many helpful features, such as pop-up calculator, context-sensitive help windows and macro commands. The Money Manager package has over 25,000 users in the UK alone. It is the ideal program for people who find that traditional accountancy programs are too complicated, unwieldy and time-consuming for their requirements.

- Any number of data files: Personal, Business, Accounts etc.
- Budget and cash-flow forecasts - which may be updated
- 12 months per file, up to 500 entries (transactions) per month
- Move a file forward a month at a time when required
- All options selected from the main menu
- Up to 20 user-defined accounts: Bank, Cash, Visa, Savings etc.
- Up to 50 user-defined classes of income and expenditure
- A reference of up to 6 characters for each entry
- Your own descriptive text of 18 characters for each entry
- All the codes are displayed on-screen whilst entering data
- Add, modify and delete existing entries at any time
- Quick insertion of standard entries and standing orders
- Entries can be sorted into date order at the touch of a key
- Single character 'mark' for extra reporting selectively
- Statements showing each entry in detail with running balance
- Reports may show classes merged into logical groups
- Spreadsheet type table showing class totals in each month
- Report showing class totals for each account
- Bar chart for up to 4 selected categories
- Pie charts of up to 20 selected 'slices'
- Detailed bank statement reconciliation with running balance

- Totals for each class of transaction for any period
- Report of monthly income, expenditure and cash-flow etc.
- Report of account and class totals (eg profit & loss)
- Account statistics - monthly max, min, average, balance etc.
- Automatic calculation of VAT, with multiple rates if required
- Detailed VAT reports showing taxable, VAT and gross amounts
- Summary VAT statements in the same format as a VAT return
- Simply ignore VAT features if they are not required
- Print any report to built-in (or separate) printer
- Print any report to a file for word-processing (eg in Locomotif)
- Data search facility to find 'lost' items
- Built-in text line editor for data entry
- Horizontal and vertical scrolling of screen reports
- Pop-up five function multi-line calculator with memory
- Macros to record and replay user-defined reports
- Context-sensitive help windows appear at the touch of a key
- Automatic creation of back-ups for data files
- You can choose which disc drive to use for data on a PCW8512
- Comprehensive 64 page indexed manual
- Two sets of sample data for practice and familiarisation
- Free and indefinite telephone support

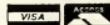
**Connect**  
Software Ltd.

To receive your copy of Money Manager PCW by return post phone us now with your credit card number, or write to us at the address below enclosing your cheque for £49.95

**01 743 9792**

Connect Software Ltd., 3 Flanchford Rd., London W12 9ND

8am to 10pm, 7 days a week



AMSTRAD EXCLUSIVE

# TOYS FOR T

Why doesn't the computer industry attract more

**E**ducational and career equality for women – wherever practically possible – is nowadays a universally-acknowledged goal. We say 'wherever practically possible' simply because few women would probably be prepared to stand their ground and argue that they can do just as good a job as any man when it comes to, say, working on a building site or in the course of heavy-duty police work. Having said that, accessing the knowledge required for the purposes of self-advancement, whatever form that takes, should be everybody's unquestionable right, regardless of sex – or so the theory goes. Sometimes it sounds as hollow-sounding as all those other well-worn and meaningless aphorisms; the truth of the matter is that a yawning gap still exists between these glibly-professed

objectives and actual practice.

In today's secondary schools, for example, a sharp division remains – in terms of subjects being studied – between boys and girls. What's more, it is a division that manifests itself again and again in the career paths chosen by those pupils long after the classroom doors have closed behind them for good.

Statistics gleaned from the Department of Education and Science reveal the following: in the academic year 87/88, 4,164 men enrolled at British universities to become full-time undergraduates in Computer Studies; only 410 women enrolled for the same course. In the academic year 86/87, 3,802 men enrolled for the same course compared with 425 girls, and in 85/86, 3,653 men enrolled as

## Nature or Nurture?

Some psychologists have suggested that there are innate differences between the sexes, possibly genetic in their origins. They believe that these differences affect the way that intelligence is applied to certain subject areas. Differences in spatial ability, for example, are said to account for the predominance of boys in mathematical and problem-solving activities. Girls, they say, will tend to break problems down into multiple stages and this can lead to a greater chance of error.

## Fiona Hurd

'I was lucky. I could have fallen flat on my face,' recalls Fiona Hurd, with more than a hint of relief. She pulls up a chair and leans on the large desk that seems to occupy most of the floor space in this plush inner sanctum office at the Opus Technology headquarters in Surrey. 'Leaving a career that you're already well up in after six years to start afresh somewhere else – from the bottom – is a gamble. Luckily, this was one gamble that paid off,' she says.

In May of last year, Fiona quit her six-year-old career in the oil industry to join the Customer Support department at Opus Technology Ltd, the company that manufactures and sells its own PCs. A growing disillusionment with the former combined with a strong desire to get involved with the latter were all that it took. She's proud of her progress – and rightly so: 'Not bad in a year,' she grins, 'and it's fun too.'

We asked Fiona if she had ever undergone any formal electronics training before. 'None at all. My job in seismic processing involved a lot of hardware handling and it was then that I realised I was enjoying this aspect of the job much more than just sitting in front of the terminal.'

Fiona's academic path to success, not surprisingly, involved making substantial inroads into those areas of study traditionally thought of as male. The same was true of university (where she took a degree in geology), the oil industry that followed and now her present career. Fiona, though, like many professional women in her situation, subscribes heavily to the philosophy that provided you know what you're talking about – and you have the aptitude to learn – sex is entirely irrelevant. She cites as examples a number of new recruits in the company's technical support department. 'The girls,' she says, 'are just as quick as the lads to pick it up.' That's not to say however that she's never had to deal with the occasional stroppy caller.

'Oh yes,' she says, raising her eyes to the ceiling, 'you pick up the phone and say "Good afternoon, Customer Support here," and you can almost hear them freeze. The same happens at shows when I meet some of our clients face to face for the first time.'

Some are really surprised; some – to give them their due – don't even bat an eyelid. I get the occasional "Oh my God – you're a woman!" response when I'm called over to help with a technical query. That just makes me more determined to sort the problem out – especially if they think I can't do it.'

Fiona remembers the client who phoned up with a particular problem, refusing to believe the solution she offered until he had heard a male colleague say it. 'That was a one-off, though,' she chuckles.

We asked her if there are times when being a woman is a distinct advantage.

'When you're supervising a company's services, people can get



Fiona Hurd, Customer Support Supervisor at Opus Technology in Surrey

very aggressive. I've dealt with aggressive people who would probably have gone straight for the jugular if I'd been a bloke. You can get round them more easily as a woman.'

Fiona is anxious to add, however, that incidents like these are becoming less and less frequent as more women come into the industry.

So just how highly-prized is her role in the company?

'The company makes computers and sells them,' she explains. 'Technical support and the workshop are, if you like, luxuries. The company pays our salaries to support the product. But they don't get anything back monetary-wise from us. It has to be highly-prized or we just wouldn't do it; and, of course, a lot of companies don't.'

It is with an expression of mock-aversion that Fiona answers our question as to whether she earns the same salary that a man in her position would command. She is also convinced that the career moves that have been available to her in the past and will be open to her in the future are all equal opportunities ones.

'I don't work in a purely technical environment anymore. Supervising the customer support department, I have had the opportunity to progress into man-management areas. I feel that if I did want to progress in a certain way, there'd be a channel I could go down.' As Fiona herself says, 'I feel that I know my job and my products well enough to hold my own no matter what!'

# THE BOYS?

act more women? Sharon Bradley investigates

opposed to 452 girls.

More girls are embarking on higher education courses – irrespective of subject – than ever before. It's also true that more girls are studying in areas that have a clearly-defined professional relevance and are making inroads in other traditionally male-dominated arenas like law, architecture and business management. Why, therefore, as we've just seen, is the number of women enrolling on British university Computer Studies still so relatively small and decreasing while the number of men beginning equivalent studies is on the increase?

## All things being equal

Lisa Payne is Lecturer in Computer Science at Coventry Polytechnic. She also works on the Women and Work Programme based at the Polytechnic, teaching computer courses to women. As a result of studies conducted with two

groups of 13 to 14 year old girls, Lisa has been able to formulate her own tentative theories as to why more women are not developing careers in the computer industry.

Explains Lisa: 'We conducted two workshop sessions over a period of two days, each workshop consisting of a hundred girls. At the end of each day's presentations, we asked the girls to do some sketch drawings which would accurately reflect the way they felt about "computer people". The results were very interesting.'

80% of the class thought that "computer people" were men; only 20% of the girls saw them as being female. 50% thought of them as young, 40% as middle-aged, and only 10% as old. Again, 50% felt convinced that "computer people" had to be ultra-intelligent, 40% agreed that an average level of intelligence was probably all that was required, while only 10% said that "computer people" didn't have to be all that clever after all. ▶

## Jean Gilmour

Jean Gilmour is Senior Technical Writer at Locomotive Software in Dorking, where she has been working for the past four and a half years documenting the company's ever-diversifying range of products.

"Initially," she explains, "I was the only technical writer here. Now, though I'm Senior Writer and do tend to have my ear in just about everything, I don't do the writing single-handedly. Since Locomotive's expansion, I have taken on an assistant and a junior to help me."

In a high-precision industry like the one in which she works, Jean is convinced that the odd female attribute can be a distinct asset: 'In general,' she says, 'women are much more prepared to work at something until they get it right. Men are happier accepting something that's nearly right – but not quite – so that they can get on and tackle the next job.'

Jean is the first to admit that a certain degree of perfectionism isn't necessarily a bad thing when it gets to her particular neck of the woods – writing and page layout. 'You need to be fussy. It's a pain in the neck, it requires a certain amount of effort, but there's no getting away from the fact that the results are better. And being a female helps from that point of view.'

As a Cambridge physics graduate, the female contingent of her course was heavily outnumbered: 'In my year at Newnham College, 15 to 16 of us were doing Physical Sciences. By the third year, three of us were concentrating on physics alone out of a class of 96 students.'

Journalism has always exerted a strong 'pull' on her: after leaving Cambridge, Jean worked for a while in the Institute of Physics Publishing Division in Bristol editing papers regularly sent in to one of the academic journals. Five months later she was working on the members' magazine, Physics Bulletin. 'This,' says Jean, 'was work which involved writing, commissioning, editing – in fact, anything you care to mention; at that time, there were only three of us putting it together.'

From there, she edited Radio and Electronics World and was working as a Reporter and Features Writer for Electronics Times when the job at Locomotive came up.

Jean refuses to acknowledge that she has, in any way, 'gone against the grain' in pursuing the career that she has. She shrugs nonchalantly: 'If you're a scientific person and a female – well, a number of us go into writing. I don't see myself as being particularly rare in that sense.'

Have there, we asked, ever been times when she felt that being a



Locomotive's Senior Technical Writer, Jean Gilmour

woman was holding her back or, at least, creating obstacles? 'I've never had any difficulty getting a job in this industry. Once into a job, I've experienced no obvious difficulty in progressing. You must bear in mind, however, that everything I've done has involved working quite closely with a small group of people, so there's a slightly different perspective there to progressing my way up a large company ladder. It's definitely a case of who you are and what you can offer, though, rather than what sex you are.'

Jean is a little bemused by the distinct lack of women programmers at Locomotive: 'All the programmers here are male, but that isn't deliberate. To say that there aren't any women programmers is obviously a generalisation, but we haven't come across any who are able to work in Assembler – which is what we use here,' she explains.

Jean's message, like Fiona's, comes over loud and clear: 'Provided you've got the aptitude to learn the trade, it doesn't make any difference what sex you are. It certainly doesn't make any difference here – I'm just me.'

## Occupational hazards

Traditionally feminine occupations which often come to the fore during secondary school years can be divided into six areas: teaching, nursing, catering, office work, retail and hairdressing.

But perhaps most tellingly of all, 80% were convinced that they were ugly; for another 70%, being interested in computers was synonymous with being boring.' The interesting thing was that they had spent a whole day in the company of professional computing women before arriving at these conclusions.

Misconceptions like these are common at even earlier ages. Lisa describes how a group of five year olds were asked to describe a typical 'science person' during the course of a similar study; the majority of the children saw such people as clever, but nonetheless boring, old men.

The implications are clear; sexual stereotypes are being set up at a very early age and children are being encouraged to believe that interests and activities of boys and girls are mutually exclusive.

### Mixed blessing

Another theory suggests that girls don't fare as well as boys in co-ed settings. Just as boys will be more likely to choose cookery and needle-work in an all-boys school, girls are more successful in 'male subjects' when they study them in all-female surroundings.

Lisa suspects that the reluctance on the part of girls to go into computing-related careers may have something to do with the large-scale introduction of microcomputers into schools. 'They are being exposed to the machines at school, they decide that they don't like what they see and simply choose not to have anything more to do with them,' she says. Why don't they like what they see?

'A lot of secondary school computer clubs take place in the childrens' lunchtimes, and although I'm not saying that this is something that happens in every school, often the machines become monopolised by the boys playing Star Wars and the usual 'Zap, Zap, Bang, Bang' games. Not surprisingly, the girls can be put off by this.' Lisa thinks that separate computer lessons for girls may well provide part of

the answer. 'It's divisive and I agree that it shouldn't have to be this way, but I think the results will be interesting.'

As far as women at a non-graduate level are concerned, they seem simply to be suffering from a severe lack of both aspiration and confidence, thinks Lisa. For many of them, computers are simply too complicated and difficult to handle, and, therefore, not worth getting excited about. This is another popular misconception that Lisa is doing her best to address with her contribution to the Women and Work Programme: 'Women,' she insists 'underestimate their abilities far more than men. All we are trying to achieve is to help them realise their full potential and banish the unreasoning "computer phobia" that many of them still feel.'

With more and more microcomputers - like the PCW - making their appearance in homes and schools alike, perhaps the time has come to relegate to the sidelines once and for all their reputation as predominantly games-playing machines. In the hands of discerning parents and teachers, even the PCW can do its bit to help eradicate the kind of blatantly inaccurate stereotyping that young women are evidently still prey to - particularly during that crucial period when educational choices that have a direct bearing on future careers are made. Learning to think of the microcomputer, whatever its denomination, as a genuine gender-impartial educational aid rather than just a 'zap, zap, bang, bang' amusement arena might provide just part of the answer.

Research has shown that up to 20% of PCW users are women; it's also clear that the machines are playing important, if not indispensable, roles in a wide variety of data processing activities - from running a business to writing a letter. The important thing is that not one of those activities can be accused of closing its doors to women.

The PCW can provide anyone - whatever their age or gender - with an easy gateway into the world of computers. It's up to today's generation of parents and teachers to remember that.

## Getting on your WIC

Helen Watt, lecturer in Computer Science at Glasgow University, is only too well aware of the fact that girls undertaking computer-related studies at universities and colleges are still drastically under-represented. She plays a very active role in a relatively young campaign called Women into Computing. It is, as she readily points out, a national organisation which aims - through a series of locally networked workshops - to encourage young women with aptitude to consider computing undergraduate courses and careers.

If you'd like to find out more about Women into Computing, contact Helen Watt on 041 339 8853.

## Fiona Faulkner

Fiona Faulkner, who works as a Systems' Analyst at MOD Ensigne in Bath, admits that her entry into the world of computers was not exactly a premeditated one. 'No,' she laughs, 'I certainly didn't wake up one morning when I was ten years old with a burning desire to be a systems' analyst.'

Fiona works for the largest organisation at MOD Ensigne - the headquarters of the Royal Navy Supply and Transport Service. The organisation supplies the Navy with absolutely anything that it might require - from ships' engines and armaments to food and beer. Consequently there are naval supply depots dotted throughout the country.

'As a systems' analyst,' explains Fiona, 'it's my job to travel out to meet suppliers on site and work out exactly what computer system might be required to make the task that is being performed there either easier or more cost-effective. Once you've reached an agreement about exactly what sort of system is needed, you have to start thinking about modelling the data to fit the requirements.' That's where the hard graft of programming begins, a job that Fiona did for a couple of years before assuming her present position eighteen months ago.

Fiona had been working in the Civil Service for nine years, in a mostly administrative capacity, when she was asked to take part in a study concerning the future of computer-based supply systems. The assorted company of programmers and systems' analysts involved prompted her to break into an area of work that she hadn't previously considered. In 1984 she became a programmer - mostly in ICL Cobol and Quickbuild.

Nowadays she's as much at home with micros as she is with mainframes - whatever the situation at hand requires. 'As systems' analysts we have a say at each stage of the installation procedure, from procuring it and getting it up and running to training those who will be using it.'

We asked her how long the training generally takes. 'That rather depends on the scale of the project,' says Fiona. 'It can be a matter of days or weeks.'



Bath-based Systems' Analyst, Fiona Faulkner

Being a systems' analyst is nothing unusual in Fiona's department which now boasts quite a few lady analysts and programmers. Whatever the policy of the Civil Service regarding equal opportunities was in the past, there is certainly no evidence of any prejudice at work now.

Fiona really enjoys the personal contact that the job brings, although, like most things, this also has its down side; project-users continually changing the groundrules mid-assignment are her main bugbear: 'Chasing moving targets can be very frustrating,' she points out. 'But, on the other hand, it's really rewarding when you know that you are working towards a positive goal - especially when the people you are helping are enthusiastic about the coming changes.'

# WRITERS NEWS

## MAGAZINE

NEWS · ADVICE · IDEAS  
INSPIRATION · PRIZE COMPETITIONS  
FEATURES AND ARTICLES

Read it ... Use it ... Enjoy it ... Profit from it  
Every month ... subscription only

Send for details and free copy to: WRITERS NEWS,  
FREEPOST PC, ROMFORD, RM6 1BR

SEND FOR YOUR FREE COPY TODAY!

### Desktop Publishing Accessory Discs

HD1 CLIPS & FONTS £12.50 (NB\*)

12 Versatile fonts plus 50 clip art illustrations

HD2 DESKTOP MAGIC

£12.50 (NB\*) 100's of desktop graphics including: Dogs, Cats, Buildings, Advertising Ads and many more, plus the amazing border maker, 50 graphics for letters and borders.

(NB\* HD 1 & 2 are available for all DTP except the

Amstrad PCW 8256/8512 Desktop Publishers)

HD3 "IMAGE KIT"

£12.50 (NB\*) 100's of desktop graphics including: Dogs, Cats, Butterflies, from Camerons to Steam Trains.

HD4 "POSTER KIT"

£12.50 (Available for all DTP) Larger cut and paste letters in 100's of desktop graphics including: Dogs, Cats, Butterflies, from Camerons to Steam Trains.

HD5 "PAGE MAGIC"

£12.50 (Available for all DTP) This disk contains: figures, portraits, borders, a variety of digitised pictures and 14 ready made decorative frames.

CDP "PACIFIC" £12.50 (NB\*)

100's of desktop graphics including a selection of 260 graphics from HD 1 & 2 and formatted for the Desktop Publisher

\*\* £12.50

\*\* £12.50

\*\* £12.50

\*\* £12.50

\*\* £12.50

\*\* £12.50



ALL DISCS ARE COMPATIBLE WITH  
MICRODESIGN II

Please specify which DTP software when placing an order



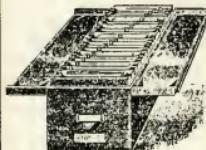
(WRITE OR PHONE FOR OUR FREE INFO SHEETS)



3 ROUNDTHORN WAY, GOLDSWORTH PARK,  
WORKING, SURREY, GU21 3QN.

TELEPHONE: 04867 81394

### ENHANCED, GREATLY



#### AnsibleIndex PLUS!

The fully-featured LocoScript indexer, now UPGRADED. Easier to use, more powerful, same price.

AnsibleIndex PLUS will index from your LocoScript documents:

- Words and phrases
- Inverted phrases
- Headings and sub-headings
- Themes and sub-themes
- Choice of automatic alphabet sorting

We include an improved version of **Check** ... fast LocoScript word counter. Counts a whole document, several in one go ... or just a small section of text. (Also available separately.) And the dreaded **Grease** is more fiendish than ever ...

**Price: £29.95**

We also supply **A.I.Q.** ... the Amstrad PCW random text generator, with uncannily lifelike (always) and funny (sometimes) results. No other PCW program is like **A.I.Q.**

**Price: £25.95**

Request our info sheet for more details. If you are an existing user of the old **AnsibleIndex**, please write to us at once for details of how to get your low-price upgrade. All Ansible software comes with a manual written in plain English. The prices shown include VAT, postage and full after-sales support. *No extras!*

### ANSIBLE INFORMATION

94 London Road  
Reading  
Berkshire, RG1 5AU  
England



Tel: 0672 62576

### MAXELL CF2 DISCS

NOW AVAILABLE WITH OR WITHOUT PLASTIC CASES

UNCASED

CASED

£ 19.95 for 10

(£ 10.95 for 5)

£ 22.95 for 10

(£ 11.95 for 5)

### AMSOFT CF2 DISCS

SORRY - STILL ONLY AVAILABLE UNCASED

£22.95 for 10

(11.95 for 5)

### AMS 30L DELUXE

DISK STORAGE BOX

\* HOLDS 15 (CASED) OR 30 (UNCASED) 3" DISCS \*

£ 11.95

### SPECIAL DISC PACK

#### AMS 30L DELUXE STORAGE BOX

FILLED WITH

15 - MAXELL CF2 CASED DISCS

£ 44.95

### DUST COVER SETS

\* HEAVY-DUTY PVC\* NEUTRAL COLOURED \*

\* WHITE STITCHED BINDING \* ANTI-STATIC \*

\* WATERPROOF \* FLAME-RETARDANT \*

2 piece sets have combined monitor/keyboard cover plus separate printer cover.

3 piece sets have separate monitor, keyboard and printer covers.

2 or 3 PIECE SETS AVAILABLE FOR PCW 8256/8512 or PCW 9512

£ 9.95

### RIBBONS

\*\* TOP QUALITY - FULL LENGTH - GUARANTEED \*\*

PCW 8256/8512

MULTISTRIKE FABRIC RIBBON

Black..... £ 4.95 each

Red, Blue, Brown or Green..... £ 5.95 each

MULTISTRIKE CARBON RIBBON

Black Only..... £ 6.95 each

PCW 9512

MULTISTRIKE FILM RIBBON

Black..... £ 3.95 each

Brown Or Blue..... £ 4.95 each

MULTISTRIKE FABRIC RIBBON

Black..... £ 4.95 each

Red, Blue, Brown or Green..... £ 5.95 each

### 9512 PRINTWHEELS

ALL UK STYLES AVAILABLE

\* MINI GOTHIC 15 \* PRESTIGE ELITE 12 \* THESIS PS \*

\* SCRIPT 12 \* PRESTIGE PICA 10 \* ORATOR 10 \*

\* LETTER GOTHIC 10/12 \* COURIER 10 \* RECTA 10 \*

£ 5.95

ALL OUR PRICES INCLUDE VAT & POSTAGE  
ORDERS POSTED NEXT WORKING DAY

### COPY COMM LTD

Aytounhill, CUPAR, Fife KY14 6JH, Scotland

ORDERS TO:

COPY COMM, FREEPOST, CUPAR, FIFE KY14 6BR

TELEPHONE: 033 77 444

(Mon to Fri, 9 to 5 - Human Being. Other Times - Infernal Machine)

FAX: 033 77 445 (Anytime!)

# SUCK IT AND C

/\* Steve Patient contemplates the C language where all the comments look like this \*/

**W**hy C? Because it came after A and B of course. C is the language that lauded a thousand quips and a million bad puns, those weary figures of speech much beloved of journalists in search of hasty headlines. Unfortunately you've probably seen them all before, so we'll resist the temptation.

C is often touted as one of the most powerful languages to program in as well as one of the more difficult. This is a perfectly reasonable assessment though does not, it can be argued, entirely explain the fascination it holds for so many amateur – and professional – programmers.

If you've ever been tempted by Basic, or even looked at the listings, then you'll know that the essence of that language is that things are induced by issuing one command after another - one line after another - each one neatly numbered. There is much talk about modular programming and making use of subroutines, but very few people actually take that advice. In C it's very different, you have no choice.

All but the very simplest of C programs will consist of a list of functions; each function must have a unique name and can be called by any of the other functions. There are no line numbers and the only places programs can go to get their work done are these named functions. This makes writing a C program quite a different project from writing a Basic program. It also means that a great deal of the C code you write can be used in future programs.

Every C program has to contain the function `main()`,

from which it starts, though `main()` can come late in the actual listing. Note that C is always written in lower case letters. As a rule upper case is reserved for symbolic constants (those bits at the beginning where something is defined as something else.) You don't have to do it this way but you should, since anything that makes C easier to follow is a good thing.

## Point the way

When you call a function (A) from another function (B), you use the function (A) name, and put any variables, the values of which you wish to pass, inside the parentheses (which have to be there anyway). Unlike Basic, only copies of variables are passed (only one value can normally be returned) and the original variables remain intact.

The function being called also has parentheses in which passed values – if any – are echoed. The body of the function is then written inside curly brackets. Any internal loop or decision-making statement inside a function also has to be enclosed in curly brackets. If more than one is involved, this can lead to visual confusion, so indenting statements is essential. That way it can be seen at a glance which pairs of curly brackets go together – or, more importantly, where you've forgotten to put one in.

If you need to change the original variable, you pass a pointer to it instead of the variable itself – and it is at this point that new C programmers start to tear their hair out. Pointers in C are a simple enough idea to grasp – a pointer simply points at a variable – but they can be hard to get to grips with in the actual programs. Add to this the fact that you can have pointers to pointers, arrays of pointers, pointers to arrays of pointers and even arrays of pointers to arrays of pointers and you can see that there is room for confusion.

Because it is so easy to re-use functions in other programs, libraries are a big feature of C. At least one library always comes with it, `STDLIB.LIB`. Since the C language specifies no means of accessing anything, no `INPUTS` or the equivalent, a library has to be written for every machine on which the language is implemented. This gives the programmer access to the keyboard, the screen, the printer and so on. Thus to do any input or output you have to call a library function.

The simplest of these are `getch()` and `putch()` to input a keypress and display a character respectively. The library usually provides a lot of extra functions built up from these simpler commands. You can usually add to the libraries and edit them if you want to. You can also write your own libraries. One of the big advantages of doing it this way is that to port a program from one type of computer to another only the machine specific library functions have to be altered.

## Downside

Because C is usually very close in its actions to the underlying machine code of the machine, it confers a great deal of power on the programmer. C runs few (if any) checks on the code you write, and mistakes in program logic can, and do, lead to spectacular crashes. When you work with Basic you actually have another program, `BASIC.COM`, looking after things and making sure your program can't do anything too silly; in C you're

## Clubbable

C is one of the few languages to actually generate its own fan club. There are C programmers' clubs all over the world. In England the people to contact are the C User Group (UK). They maintain libraries of C functions as well as a huge number of programs. So portable is the language that code written for virtually any machine can be adapted for most others. They publish a quarterly fanzine called *C Vu* and offer help and advice to those suffering from C sickness. Contact the membership secretary at CUG(UK), 64 Southfield Rd, Oxford, OX4 1PA.



Dennis Ritchie

## On DEC

In the early seventies, Brian Kernighan and Dennis Ritchie were working on a DEC PDP-11, an early mini computer with about the same kind raw computing power as a present day PCW, but with the kind of facilities more suited to running a business or laboratory (it supported multiple terminals for example).

They wrote the first version of C to run on the PDP-11 and followed it up by writing a book: *The C Programming Language*. This book, though lacking in the snappy title stakes, defines the language, explains the syntax and has lots of easy to follow examples as well as a very clean typography. It is well written and even has occasional flashes of humour. Though written with many references to the PDP-11, few books explaining any computer language have

achieved such lucidity and there is no doubt that the C Programming Language goes a long way toward explaining the popularity of C. There is now a new edition in print which anyone interested in the language should buy.

There are currently three good C compilers you can buy and one you can get free.

These are as follows:

HiSoft C++	HiSoft	0525 718271	£49.95
Arnor C	Arnor	0733 68909	£49.95
Mix C	Advantage	0242 224340	£39.95
Small C	Public domain	CP/M User Group	Free

on your own.

Once a C program has been compiled (turned into a COM file) it takes control of the PCW and is in a position to wreak software havoc on it. Because of the lack of compiler checks, this is more true of C than of almost any other language. It isn't surprising then that C programmers refer to the 'edit, compile, crash' cycle rather than the simple 'edit compile' cycle of other high level languages. This can be very frustrating and tends to lead to a more rigorous approach to program design - or insanity.

The upside of C's low level approach with all its lack of nannying is that the C programmer can do almost anything he or she likes to the machine. Of course this is implicit in the language, which was intended for low level programming – you can't get much lower than writing operating systems (all right, yes you can. You can program disc drive controllers).

### Free sample

Writing in C can be very fast and efficient but there isn't room in a short article to demonstrate how to do it, so the C program in the box is one we prepared earlier. It's written in HiSoft C. This is undoubtedly one of the best for the PCW, though it lacks support for floating point maths and has a few odd features. Specifically, the first three lines of `main()` are very strange, but are required to make `argv` and `argc` work – these allow you to pass parameters from the command line when you invoke a C program.

The program **VIEW** is designed to display any file as if it were a text file. It takes complete control of the screen and attempts to format any input file as if it were text. Most real text files will print out as they should, including program files, and even LocoScript files are rendered readable. In fact it can be used to examine any kind of file, including COM files (it will show any text embedded in the file while everything else shows up as a dot).

The program has four functions: `main()`, `browse()`, `onepage()` and `linep()`. The first of these is `main()`, of course, which checks that the file you've named exists and opens it if it does (if it doesn't, it quits, and if you haven't named a file, it asks you to do so next time). It then calls `onepage()` which prints a single screenful of text (or whatever it decides is text) using the function `linep()` to output a single formatted line. After outputting a page, if the file is long enough, the function `browse()` is used to scroll through the document a line at a time with space bar. Holding the space bar down will scroll fairly rapidly, too fast to read. When the end of the file is reached, the program quits and displays the message 'That's all folks'; simple enough in use really.

In order to avoid spoiling the screen display with keyboard input, the HiSoft C function `rawin()` is used. This uses BDOS function 6 to get keyboard input without echoing it to the screen. Most C compilers will provide some equivalent of this function.

You will notice that HiSoft C requires libraries to be mentioned at the end of a program. This is a quirk you're unlikely to find elsewhere. Something you will find, though, is the need to use octal values in code. This is laid down in the original C reference manual though it looks odd these days.

C can be infuriating, but it's always fun.

## Look C

```

/* View - a nice utility to look at files by Steve Patient */
#include stdio.h
#define EOF -1
#define LMAX 88
#define QUIT 3
#define CLEAR printf("%33E%33Y%040d")
#define S_UP printf("%33Y%040d%03M%033Y%075D%040")
/* define S_UP printf("%33Y%040d%03M%033Y%075D%040") / this will home
the cursor - delete the top line and return the cursor to the bottom line */

static int c,out,inum,ncnum; /* declare global variables */
static int *infile; /* pointer to fcb */

main(argv,argc)
int argc; int *argv[];
(FAST char argv_buffer[MAXARGS-2+132];
cpn_cmd_lline(&argv,&argc, argv_buffer);
if (argc>2)
    (printf("The correct command is VIEW filename.typ");
    exit(0);
CLEAR;
*argv++;
if (!infile=fopen(argv,"rb")) /* if no file open returns zero */
    onepage();
else
    printf("Sorry chaps, couldn't open that file\n");
printf("*****THATS ALL FOLKS*****");
}
onepage() /* this function prints the first page then calls browse() */
{
inum=ncnum=c=0; CLEAR;
while (inum < 29) /* not 30 as screen scrolls if line is too long */
    {S_UP; linep(); inum++;}
browse();
}
browse()
{
while ((ourc=freadin())!=QUIT & c!=EOF) /* control c - direct input */
    {if (ourc==32) /* space bar */
        {S_UP; linep(); /* go and print a line */
        }
    }
}
/* this function prints a line but only chars, CR and tabs */
linep()
{
ncnum=0;
while ((c=getch(infile))!=EOF)
    {if (c == '212')
        return; /* if locostrip line separator ha ha */
    c <= 0177; /* and with decimal 127 */
    if (c > 32)
        {putchar(c); /* put a char on a line */
        if (ncnum++ > LMAX) /* end if line too long */
            return;
        }
    }
else if (c==0157) /* end line if CR-octal 0D or 81 */
    return;
else if (c==8) /* this is where we handle tabs */
    {ncnum++; printf("\t");
    while (ncnum < 7 || ncnum % 8) /* mod maths to space tabs */
        {printf("\t");
        if (ncnum++ > LMAX)
            return;
        }
    }
else if (ncnum > 0) /* print a dot for all unknown values */
    {printf(".");
    if (ncnum++ > LMAX)
        return;
    }
}
#include <7cp.lib?
#include <7stdio.lib?

/* All C programs need to be commented fairly heavily to avoid confusion
when you return to your code at a later date. Anything between the pairs of
slashes and asterisks is a comment and will be ignored by the compiler.
However, you mustn't nest comments. Indenting code to show levels of
activity is equally important and C cannot be read if this isn't done. */

```

### Uncalled for

Of those who come into contact with C few go away without strong feelings concerning it; views tend to be polarised. Those who prefer strongly typed languages such as Pascal, complain that C encourages bad programming habits; others complain that it's a misnomer to call it a high level language at all. Perhaps the cruellest comment on the way C statements can be nested into unreadability, was that C is the world's first 'write only' language.

## Practical programmi

C is a good language for working on large programming projects since it lends itself to a modular approach. One of the most famous products produced in C for the PCW is Mini Office. The first version was written in Mix C while the Plus version was largely rewritten in Amor C.

# KAVIN

for all your  
**COMPUTER SUPPLIES**

TEL: 01-567 7313

13% OFF ALL PRICES FOR OVERSEAS BUYERS.

Callers welcome 9.30am - late



**ALL PRICES  
INCLUDE VAT**

(Overseas orders deduct 13%) (PRICES SUBJECT TO CHANGE WITHOUT NOTICE)

SAME DAY  
DESPATCH!

MAIL ORDER + EXPORT HOTLINE 01-567 7313

Official orders welcome from  
PLC, Government & Educational  
establishments.

ALL PRODUCTS CARRY  
KCS GUARANTEE

Post & Packing (UK only):

Ribbons 25p each

Computer Paper £3 per Box

All other items 50p each

Computer/Printers £7.50 (by courier)

Kavin Computer Supplies Ltd  
106 South Ealing Road  
Ealing, London W5 4QL  
Tel: 01-567 7313  
Fax: 01-578 2352  
Telex: 947838 GEEMS Dept KCS  
Callers Welcome 9.30-5.30

YOU ORDER BY 3PM  
WE DESPATCH BY 4PM  
(subject to availability)

## AMSTRAD HARDWARE

### Popular Wordprocessors

PCW 8256 Single Drive/256k Memory/VDU/ Keyboard/Dot Matrix Printer.....	£368.00
PCW 8512 Double Drive/512k Memory/VDU/ Keyboard/Dot Matrix Printer.....	£483.00
PCW 9512 Single Drive/512k Memory/VDU/Keyboard/Daisywheel Printer.....	£499.00

PLUS FREE AUTOMATIC SHEET FEEDER WORTH - £90.95

#### AUTOMATIC SHEET FEEDER



For PCW 9512 printer holds up to 30 sheets of  
paper.....£90.95

#### ANS 20L

**DISK STORAGE**  
Box Clever - protect your disks  
with high quality perspex, lockable  
storage boxes. Holds 18" 3" disks & cases.  
ONLY £7.50

#### ACCESSORIES

Additional Disk Drive for 8256/9512.....£132.00  
Par 21/23.....£99.50  
RS232C Cable.....£91.75  
8256 Memory Upgrade.....POA  
Trade in your old PCW  
Par 21/23 for your 8256/8512  
Part No. 2000/21640  
CALL FOR LATEST PRICES!

**3" DISK DRIVE  
CLEANING KIT** ONLY  
£7.50

#### GAMES SOFTWARE

Starglider.....£19.95  
Piranha.....£19.95  
Cyrus Chess II.....£14.00  
Time & Magic.....£11.95  
Cyrus Chess CP.....£11.95  
Bridge Play.....£18.00  
Lady Goddesses.....£20.00  
Head Over Heels.....£14.95  
Duke of Cheekers.....£14.95  
Matchday II.....£14.95  
Ballyhoo.....£20.00  
Sonic the Hedgehog.....£20.00  
Tomahawk.....£14.95  
Baboon King.....£14.95  
Baboon King CP.....£14.95  
Knight Orc.....£19.95  
Star Trek.....£19.95  
Space Gun Shooter.....£19.95  
Strike Force Harrier.....£19.95  
Fish.....£19.95

#### RIBBONS

**LOW LOW PRICES**  
Ask for quantity discount

2	4s
PCW 8256/8512/LOCO3000.....£2.80	£2.70
8256/8512 Red or Blue.....£2.80	£2.65
8256/8512 Caron.....£2.80	£2.65
DMP 2000/3000.....£2.80	£2.60
PCW 9512 Red or Blue.....£2.85	£2.75
PCW 9512 Red or Blue.....£2.85	£2.75

Minimum of 2

#### PAPER & LABELS

**PCW 9512 DAISYWHEELS**  
1box 20.....£11.50  
500 sheets 9" x 5".....£10.75  
500 sheets 9" x 5".....£12.00  
3M Sony 9.5" DS/DO.....£16.50  
£16.75  
All discs are guaranteed.  
We do not stock cheap disks

2000 sheets 11" x 14.5" 1pt 60gsm.....£16.27
1000 sheets 11" x 14.5" 1pt 60gsm.....£16.82
2000 sheets 11" x 9.5" 1pt 60gsm.....£14.16
1000 sheets 11" x 9.5" 2pt NCR.....£23.26
2000 sheets A4 1pt 70gsm Microperf.....£11.98
1000 sheets A4 1pt 80gsm Microperf.....£11.49

Labels

1 Across.....£9.20
2 Across.....£9.60
2000 3" x 1".....£8.65*
2000 4" x 1".....£11.74
2000 4" x 1".....£9.65
2000 4" x 1".....£13.00

\*Available in Yellow, Pink, Green (£1 extra)

OTHER SETS AVAILABLE

#### ACOUSTIC HOOD FOR PCW 9512

Silence that  
meets you with  
our high quality  
printer muffler.  
Up to 80% noise  
reduction.

Our Price £79.95  
Base for the hood £24.50

#### AMSTRAD PCW PRINTER MAINTENANCE KIT



For 8256/8512  
removes ink deposits maintains  
print quality  
Our Price £16.50

#### PCW DESKTOP PUBLISHING

Fleet St. Editor Plus.....£43.00  
The Database Publisher (software).....£23.00  
Database Desktop Publisher (with AMX Mouse).....£60.00  
AMX Mouse Only.....£44.85

#### STOP PRESS

DESKTOP PUBLISHING  
13 Fonts, Clip Art, Typesetting,  
Cut & Paste Up, Graphic Design,  
Stop Press Only.....£34.00  
Stop Press & AMX Mouse.....£46.70

#### 3" AMSTRAD DISKS

CF-2.....£12.45 £23.45 £49.50  
CF-2 DD.....£23.00 £48.95 £99.00

#### DUST COVERS

PCW 9512 (3 piece).....£12.45  
PCW 8256/8512 (3 piece).....£11.45  
PC1640 (2 piece).....£9.50  
PC1640 (2 piece).....£9.50  
DMP 2000/3000/3160.....£4.50  
DMP 4000.....£5.50  
LOCO100.....£4.50  
Eliminates dust and static with these attractive-  
ly designed dust covers

#### DATAfax

DATAFAX BY Kempston  
Diary/Phonebook/Calendar/Notepad  
Filofax on your PCW.....£33.50  
Stationery.....£6.95  
GIFT PACK (with Stationery/Binder).....£42.00

#### Mini Office PROFESSIONAL PLUS

Very successful - many new features  
5 separate programs - Wordprocessor  
• Database • Spreadsheet • Graphics  
• Communications Interactive

OUR PRICE ONLY £33.35

#### COPY HOLDERS

Win  
adjustable arm  
80 column  
£14.50  
132 Column  
£19.50  
Desk Top  
£14.50

#### TIED UP/PROTECT

- WITH  
MAINS  
FOUR GANG  
SURGE PROTECTOR  
£16.95

#### SOFTWARE

##### ACCOUNTS

Sage Popular Accounts.....£94.40  
Sage Payroll.....£74.15  
Sage Invoice/Stock Control.....£47.15  
Sage Accounts Plus.....£101.20  
Globeplus Stock/Shares Ledger.....£9.95  
Camsoft Payroll.....£109.95  
MAP Integrated.....£105.00  
Money Manager Plus.....£28.75

##### WORDPROCESSING

Tasman Tasword 8000.....£18.40  
Tasman Tasprint 8000.....£11.50  
Tasman Tasview 8000.....£3.80  
Tasman Tas Sign.....£2.00  
Amor Protect.....£42.05  
Newword II.....£49.45

##### LOCOMOTIVE SOFTWARE

Locomotif 2.....£28.75  
Locoscript for Loco II.....£19.50  
Locoscript + Locoscript II.....£32.50  
Locoscript II.....£21.85  
Loco II.....£19.50  
Locofile.....£28.00  
Locofont 2.....£13.80

##### SPREADSHEETS

Amsoft SuperCalc II.....£48.50  
Newstar Tracker Turbo.....£36.50

##### DATABASES

AI Last Plus.....£28.75  
Datastation II.....£32.50  
Sage Reserve.....£44.50  
Camsoft Cambase II.....£24.45  
Masterfile 8000.....£39.95  
dBase II.....£7.95

##### COMMUNICATION

Linkit 21/23 Modem (needs RS232 inter/  
face), Autodialing & Answering, Hayes  
Compatible, 32 Names store,  
3 Help Menus.....£148.35  
Sage Communicate Software.....£94.95  
Sage Chat+ Linkit Modem.....£209.50

##### LANGUAGE

French Mistress Kosmos.....£16.95  
German Mistress Kosmos.....£16.95  
Spanish Tutor Kosmos.....£16.95  
Italian Tutor Kosmos.....£16.95

##### SPECIAL OFFER ON TYPING

Ianyst Crash Typing.....£19.50  
Ianyst Two Fingers Touchtype Course.....£19.50

##### GENERAL UTILITIES

Mass Easy Labeler.....£26.45  
Rotate.....£19.95  
Digital Pascal MTC-.....£39.00  
Digital C Basic.....£39.00  
Programmer.....£39.00  
Amor C.....£43.70  
Amor Maxam.....£43.70  
Digital Personal Tax Planner.....£23.00

VOLUME PURCHASERS CALL FOR ASSISTANCE - GOVERNMENT, EDUCATIONAL & OVERSEAS ORDERS WELCOME.

#### KAVIN COMPUTER SUPPLIES LTD

106 South Ealing Road,  
Ealing, London W5 4QL  
Telex: 947838  
Fax: 01-578 2352  
VAT INCLUDED IN PRICE  
TEL: 01 567 7313

# THE EXECUTIONER!

Tim Nott takes the lid off SuperCalc's black box

Sitting one day at your keyboard, a squeal of brakes outside heralds the arrival of the Minute Mansions super salesman. Enter Peter Patterwell, beaming.

Not only has he a briefcase full of orders, which you accept with enthusiasm and gratitude; but also a well travelled Tesco bag, containing what he touchingly refers to as "This month's expenses. Bit of a mess, I'm afraid, but I'm sure you can sort them out with that computer thing of yours." You take the bag and shake out the mass of till receipts, credit card vouchers, tickets and scribbled notes, all in no order whatsoever and you hear Peter's Corgi GLS roar off in search of new conquests.

Although it is an easy matter to construct a spreadsheet that will total up, and sort into order such a mess of figures, you really need something better. If you could create a spreadsheet that loaded itself, accepted data entry, then took care of all the fiddly bits, such as calculating, saving and printing the results, then a complete computer illiterate

## Listing 1- the main spreadsheet, EXPENSE.CAL

```

A1 = "
E1 = "Minute mansions- salesperson's expenses
A2 = "
E3 = "Enter payments in any order, with the full date in the first row
E4 = "Thereafter only enter the day of the month
E5 = "Remember to precede text with a double quote [SHIFT 2]
E6 = "When you have finished, type an ampersand [SHIFT 7]
A7 = "
A8 = "Date
A9 = "DD
B9 = "MM
C9 = "YY
E9 = "Paid to
F9 = "For
G9 = "Amount
A10 = "
A11 = 0
B11 = 0
C11 = 0
D11 = DATE(B11,A11,C11)
E11 = 0
F11 = 0
G11 = 0
A12 = 0
B12 = IF(A12>0,B11,0)
C12 = IF(A12>0,C11,0)
D12 = DATE(B12,A12,C12)
E12 = 0
F12 = 0
G12 = 0
A13 = 0
B13 = IF(A13>0,B11,0)
.
Repeat for rows 13-25
.
A25 = 0
B25 = IF(A25>0,B11,0)
C25 = IF(A25>0,C11,0)
D25 = DATE(B25,A25,C25)
E25 = 0
F25 = 0
G25 = 0
A26 = "
F27 = "Monthly total:
G27 = SUM(G11:G25)

```

EXPENSE.CAL			
1	2	3	4
Enter payments in any order, with the full date in the first row			
Remember to precede text with a double quote [SHIFT 2]			
When you have finished, type an ampersand [SHIFT 7]			
Date			
DD MM YY	Paid to	For	Amount
11 22 89	Red Lion Hotel	Lunch	18.54
12 2	Sid's stationery	Filofax Refill	1.60
13 19	Post Office	Postage	2.45
14 23	Bristol Bus Co	Season Ticket	54.50
15 25	McBoushutz	Lunch	2.49
16 26	McBoushutz	Postage	1.60
17 28	Wreck Recovery Ltd	Tow in	49.49
18 28	Phil's Pharmacy	Indigestion tablets	1.59
19 28	McBoushutz	Postage	3.50
20 28	Terry's Taxis	Fare to station	5.50
21 17	Cardiff Motors	Car Wash	2.00
22 28	McBoushutz	Photocopying	1.20
23 28	British Rail	Fare home	22.46
24 1			
		Monthly total:	
25 24			
Width: 3 Memory: 28 Last Col/Row: G27 ? for HELP			
D1			

Data entered, you are ready to return control to EXP.XQT.

might be able to use it. Even, perhaps, Peter Patterwell.

What you need is a 'black box': a system where anyone can feed what they have (grass, coins, data), into one end, and obtain what they want (milk, chocolate, printouts), from the other end, without having a clue as to what the box contains or how it works.

Enter the eXecute command, which works in a very similar way to the CP/M SUBMIT command. It tells SuperCalc to take instructions from a file on disc, rather than from the keyboard. This can be invoked either by the /X command, or directly from CP/M: for example, typing SC2 EXP [RETURN] will load SuperCalc, look for a file called EXP.XQT, and take its orders from there.

Each line of the file contains exactly what you would normally type in at the keyboard. This can be text, figures, slash or other commands. An ampersand is used to transfer control between the .XQT file and the user.

## Cubic capacity

When creating black boxes, special care must be taken over formatting and the state of the various options available. So having created the usual start of day disc, load SuperCalc from the M drive, and do some formatting. Format columns A:C to 3 characters wide with /FC A:C [RETURN] 3 [RETURN]. Format column D to one column wide and hide it, with /FC D [RETURN] 1 H [RETURN]. Format columns E:F to a width of 20. Then type in listing 1, having first turned off the auto-recalculate function with /GM.

Listing 1 is very simple, but serves well to illustrate the power of the eXecute command. The formulae in D11:D25 convert the English style dates in columns A:C into a single date value that SuperCalc can understand. It is of no interest to the user, which is why that column is hidden. Enter this formula in D11, and replicate it through D12:D25. The formulae in B12:B25 and C12:C25 save the user the trouble of typing in the month and year each time. Enter these in B12 and C12, and replicate them through rows 13:25. This time, select the 'ask for adjust' option and choose N (no adjust) for B11 and C11.

The formulae will then go forth and multiply, with the result that the month and year entered at the beginning will be copied for each entry as long as the day of the month is greater than zero. Otherwise, the month and year will also be zero.

Type in the final formula, in G27, which adds the totals, and proceed to protect the formulae and headings with the /P(rotect) command. Don't protect rows 3:7, as these are merely on-screen instructions. Enter a zero in all the empty data entry cells, i.e. all of row 11 except for C11, and columns A and E:G in rows 12:25.

Now create two user defined formats by typing /FD. A grid showing 8 possible formats will appear on the screen. On the first column, set 'zero as blank' to Y, 'decimal places' to 0, and everything else to N or 0. Do the same for the second column, except set 'decimal places' to 2. Type [ALT Z] to return to the spreadsheet. Format columns A:F to user 1 (/FC A:F [RETURN] U1 [RETURN]) and



column G to user 2. All the zeroes will then disappear, smartening up the act somewhat.

Move the cursor to the right, to get the direction arrow pointing right then turn on the tab function with GT. As we discovered last time, this takes the cursor to the next non-protected, non-blank cell after each entry. Save the spreadsheet to the A: drive as EXPENSE.CAL and clear the

SuperCalc will sort all the ERROR dates (i.e. empty rows) to the bottom of the list.

The .XQT file then D(eletes) R(ows) 3:7, so that the instructions do not get saved or printed, turns off the borders for a prettier printout, and sets up a prompt message in A25. It then invokes the S(av)e command to drive A, and waits for the user to enter the filename, followed by an A, for All, then another ampersand. When the save has been made, .XQT regains control, B(lanks) out the prompt in A25, and finally O(utputs) the D(isplay)-All of it- to the P(rinter).

Turn off the borders with /GB (the .XQT file won't work with them on) and save this file twice; once in the usual way, as a CAL file, which will enable you to reload it for editing if necessary, and then as a text file by /O(utput) D(isplay) ALL, D(isc). You will be prompted for a file name so enter A:EXP.XQT.

All that remains now is to finish the start of day disc. The PROFILE.SUB file should be altered to that in listing 4. When the disk is booted, the relevant files will be copied to drive M, SuperCalc loaded, and EXP.XQT run.

## User friendly

To use, sit Peter Patterwell at the keyboard. Show him how to insert a disc and how to load the printer. Switch on, put the start of day disc in the drive, and let him get on with it. When the .XQT file is doing its stuff, the screen leaps about in a rather startling manner, but fear not and wait until it settles down before trying to input data. A slight disappointment is that the keyboard doesn't come to life like a piano, but for £49.95 on an 8 bit machine you can't expect everything.

Hopefully, this gives some idea of what the eXecute command can do. It can also, inter alia, merge spreadsheets and invoke .XQT files from within .XQT files. Clever use of .SUB files, .XQT files and SETKEYS can produce a whole suite of bookkeeping programs, the only limitations being your ingenuity and the machine's memory.

## Listing 2- the introductory message, INTRO.CAL

C10 = "Welcome to the expenses reckoner  
 C12 = "Please check the printer is loaded with paper  
 C14 = "Remove the system disc NOW and insert the data disc  
 C16 = "Type an ampersand [SHIFT 7] to start

## Listing 3- the EXP.XQT file

```

A1 = "/intro,a
A2 = "&
A3 = "/2y
A4 = "/expense,a
A5 = "/=a11
A6 = "&
A7 = "1
A8 = "/acd,11:25,an
A9 = "/d3:7
A10 = "/gb
A11 = "/=a25
A12 = "Type in the month (Jan-Dec), then [RETURN] A [SHIFT 7]
A13 = "/sa,&
A14 = "/a25
A15 = "/odall,p
  
```

## Listing 4 - the PROFILE.SUB file

```

PIP
<M:=A:ASC2|[RO]
<M:=A*:CAL|O
<M:=A*:XQT|O
<
M:
SC2 EXP
  
```

***** Minute Mansions - salesperson's expenses					
DD	MM	YY	Paid to	For	Amount
8	10	89	Sid's stationery	Fax/ifax Refill	1.60
				Lunchbox Refill	5.50
				Overnight stay	35.00
				Postage	1.00
				Photocopying	1.50
				Car Wash	1.00
				Breakfast	1.50
				Lunch	18.54
				Gas	4.50
				Taxi to station	5.50
				Fare home	22.46
				Season Ticket	24.50
Monthly total:					191.15

The final result: SuperCalc's self-executing file takes the grind out of spreadsheet organisation

screen with the /Z(ap) command.

Listing 2 is not really a spreadsheet at all, but simply a list of instructions to the user. Type it in, with column C formatted to a width of 60. For a touch of class, format column B to a width of zero, and leave the cursor hiding there, with the direction arrow pointing vertically. Turn off the borders with /GB, and save this as A:INTRO.CAL.

## Commanding presents

Having got the tedious bit out of the way, you can now concentrate on the .XQT file. This needs to be a simple ASCII file, and can be produced with LocoScript, RPED, your favourite text editor, or ED.COM, a utility provided on the Amstrad system discs for those who like a challenge. However, .XQT files can be produced with SuperCalc, albeit in a roundabout way. Zap the last screenful (you did save it, didn't you?), and format column A to a width of 60. Type in listing 3, all in column A: note that each entry starts with double quotes, and any entry that is going to enter text into a cell starts with double double quotes. If you do use a different means to construct the file omit the opening quotes.

The lines in listing 3 may look like absolute gibberish, but they are, in fact, what you would type into the SuperCalc command line, without the interactive prompts that the program supplies. Line 1 would appear on the command line as /Load,INTRO,All, which is self explanatory. The solitary ampersand in line 2 passes control back to the keyboard, giving the user time to read the instructions in the INTRO file, before typing an & to hand back control to the .XQT file.

Line three then Zaps the intro, and you now should be able to figure out that the next three lines load the main spreadsheet, park the cursor at the starting point, and hand back control to the user. The user can then enter the data as per the on-screen instructions in rows 3:6. Having done that, typing another ampersand hands the reins back to EXP.XQT, which then performs a recalculation (!).

The next line contains a new slash command, /A(rrange), and tells SuperCalc to A(rrange) Column(D), from rows 11 to 15 in A(scending) order with N(o) adjustment of formulae. This is the column that contains the hidden Date value, so SuperCalc will sort the transactions into chronological order. It would seem easier to do this by simply Arranging column A, without all the date business, but then SuperCalc would put all the zeroes at the top of the list. However, it treats date values in a slightly different way, in that a date of 0/0/0 is an ERROR. This doesn't bring things to a halt, but

## Out of dates

The SuperCalc date functions operate between 01/01/00 and 12/31/2099, or in English, from 1st January 1900 to 31st December 2099. As well as displaying remarkable confidence in the product, this means that come the year 2000, you will have to enter the year in full, and can look forward to reformating all those year columns.

## Dos & don'ts

SuperCalc will interpret any ampersand in an .XQT file as 'return control to keyboard'. Don't, therefore, try to enter a prompt line such as 'Insert disk & press RETURN from an .XQT file- it will grind to a halt.



# ESTIMATING SOFTWARE FOR BUILDERS

A SPECIALIST SYSTEM  
FOR BUILDERS ONLY

Call Lindsay, Tony, or  
John - 0387 88612  
(4 lines) ... and have a  
FREE information  
pack on your desk  
tomorrow!

**MCGREGOR**  
ESTIMATING SYSTEMS

■ It can slash your  
estimating time by  
more than seventy  
five percent... It is so  
easy to use that the  
very idea of 'training'  
is a joke... and it  
costs just £129 ■

# GET SMART!

**BBD**  
• DUST  
COVERS

**BBD**  
• DUST  
COVERS

Protect Your Computing Equipment With  
**BBD PROFESSIONAL DUST COVERS**

- In today's economic climate where equipment failure costs time and money protecting your hardware from wear and tear is the smart thing to do and the smart way to do it is with dust covers from BBD Professional Range.
- Manufactured from top quality washable nylon and attractively finished with contrasting piping BBD covers are simply the smartest protective covers available.
- BBD covers can be washed and ironed without fear of fading or shrinking and will never crack or lose their shape.
- With all these superlative features you might expect BBD covers to be a little expensive. Nothing could be further from the truth.

**AMSTRAD PCW 8256/8512: £11.95**

In light grey with green piping. 3 piece set

**AMSTRAD PCW 9512: £13.95**

In ivory with green piping. 3 piece set

- BBD also offer a wide range of matching covers for the printers from only £5.50. These include Amstrad DMP 2000, 3000, 4000 and L03500, and a wide selection from Brother, Canon, Citizen, Epson, Star etc., etc. Generally covers for 80 column printers are £5.50 and for 132 column £6.50

## GET SMART! GET BBD! BBD DUST COVERS

The Standish Centre

Cross Street, Standish, Wigan WN6 0HQ

Telephone: 0257 425839 Ext 32 Fax: 0257 423909

DEALER ENQUIRIES WELCOME

**Into Print!**

A unique publishing support service for writers, voluntary groups, small businesses and anyone else who needs to get words into print.

- ✓ LASER PRINTING
- ✓ DESKTOP PUBLISHING
- ✓ EDITING
- ✓ COMPUTER STYLE CHECKING
- ✓ TRAINING & CONSULTANCY WORK
- ✓ DATA TRANSFER FROM LOCOSCRIPT

Expert help from experienced writers and self-publishers. Realistic fees. Discounts for educational groups and charities.

Contact John Hunt or Penny Hitchin at Groundwork, Old Gatehouse, Station Square, Grange-over-Sands, LA11 6EH. Tel 05395 33600

## The Composer's Pen

"The ability of the program to handle even the most complex musical layouts is staggering... Unreservedly recommended." (New Computer Express)

"It's been very well designed...an invaluable tool for producing orchestral parts or arrangements...powerful...very easy to use." (The Guardian)

Charlie is my Darling

Best known arrangement



Composit Software (Dept. 11)  
FREEPOST  
10 Leasowe Green,  
Lightmoor  
Telford, Shropshire  
TF4 3BR

Write for  
details - no  
stamp needed.

Telephone our  
order hotline:  
**0952 595436**

Page 2

### Features include:

- Up to 99 staves
- Up to 20 note chords
- 9 octave pitch range
- Any number: triplets
- Seven clefs
- Transposition
- Comprehensive beaming and flagging
- Full control of note and stave spacing
- Text and standard music symbols
- 'Cut and paste' music
- Print the score and the parts
- Clear manual written by a musician

The Composer's Pen

**£65**

(Please specify PCW8256/8512 or PCW9512 when ordering)

Now available!

**The Composer's Pen System**

(PCW8512 incl. Loco1 plus The Composer's Pen program)

only **£489**

(also available for PCW8256 & PCW9512)

Prices exclude VAT

Write or ring for details of our special Christmas offer!  
Cheques payable to Composit Software



# BEHIND CLOSED DOORS

September's feature on the secrets of Locomotive Software prompted our ace reporter to detach himself momentarily from the bar and investigate the software company which is possibly the most obscure in the world: Ansible Information Ltd.

Ansible began life in 1984, and again in 1985, 1986 and 1988. For a company which has had no effect whatever on the working habits of nearly four billion people, its offices are surprisingly grandiose, consisting of two crumbing Victorian slum houses 45 miles apart. Asked how they can afford such palatial premises, head programmer David Langford quipped, "We can't, but we have to sleep somewhere."

Besides its basic commitment to unpronounceability, Ansible, as originally envisaged by chairman Christopher Priest, was to provide software solutions for unknown, obsolete computer systems which nobody owns or buys any more. "While stealing computer time in the Oxford nuclear physics department, I learned to program an IBM 1130 by punching the cards with my teeth," explained technical director David. "Unfortunately this skill was less viable than hoped in the home computer market."

Ansible's first commercial project was a system of pop-up menus which might have been a great success if restaurant owners hadn't objected to having slots sawn in their tables for the installation of this simple, spring-loaded device.

What complementary skills did production chief Christopher bring to the company? "By then I'd written several highly praised though unremunerative SF novels in which shifting realities and hallucinatory narrative established a dreamlike state where no fact or interpretation seemed reliable. This left me ideally qualified to write industry-standard instruction manuals."

## Off the hook

How did Ansible enter the Amstrad market? Secretarial scapegoat David explained: "As SF writers, we used to be forced to look at friends' terrible, badly-typed, unpublizable novel drafts. Then

we noticed a change: more and more we were seeing terrible, unpublizable novels smartly produced on PCWs! This was an obvious pointer. Also, we had this idealistic notion about making obscene sums of money."

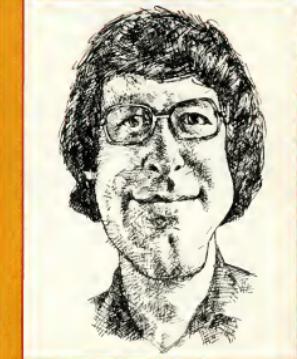
An early Ansible product was the TYPO program, which could be run against LocoScript documents to introduce random spelling errors, misaligned letters, etc., thus catching the eyes of editors who'd grown bored with excessively perfect word-processor scripts. But these were early days for Ansible, and TYPO was withdrawn owing to a slight bug which in its first releases (up to version 4.79) could cause PCW monitors to explode.

Is the computing world anything like the directors' former haunt of SF writing? "Oh yes," replied switchboard operator Christopher. "The combination of good reviews with low profits and huge tax demands is very nostalgic. We keep sales down partly by writing software for obscure jobs no one wants done — like indexing — and partly by our policy of not answering the phone."

Our reporter was shown around Ansible's trophy room, and peered with revulsion into the glass case containing more than 47,000 pin-mounted bugs from early programs. On the wall are framed letters from computing giants Locomotive, WordPerfect Corporation and many more, all telling Ansible to watch it if they don't want to get sued.

Is it possible to explain Ansible Information's fabulous lack of success? "I put it down to beards," commented tea-boy David. "In big-name software houses, male staff have peculiarly irritating beards — look at that horribly hirsute lot at Locomotive. Unfortunately my wife won't permit such a drastic revision of our public image."

We followed the Ansible team through a complete day's work, beginning with intensive hours of oversleeping. Software boss David expertly showed how five minutes of making random changes in a program can quite often move the bugs around a bit, while public relations maestro Christopher shouted down the phone at multi-million-pound companies who as usual wanted a



A page in  
the company  
of author and  
PCW pundit  
David Langford

LANGFORD

£29.95 software package but claimed total inability to write a cheque for such a huge amount in less than six months.

## Too far gone

After a long discussion about the practice of HM Inspector of Taxes in the company's nearby boardroom, known as The Plasterers' Arms, the mailroom supervisor (Christopher) and philatelic salivation operative (David) gave an exciting demonstration of how on a busy day Ansible often mails out enough software parcels to count on the thumbs of both hands.

Of which of its achievements, then, is Ansible most proud? "Our manuals," insisted technical authorship co-ordinator Christopher. "We print fewer split infinitives and maintain a higher level of semicolons than almost any other doomed company of comparable size based in Reading."

"I'd say our support service," contradicted customer liaison assistant David. "Within weeks of

receiving a routine letter of complaint or death threat, we rush back a full explanation that the bug in question only appears to be so because they've misread the manual, and in fact doesn't exist, being instead a valuable feature requested by thousands of past users, which in any case results from flaws in CP/M or Amstrad's hardware."

Why the name Ansible? "We wanted the software to go ever so fast," said nomenclature supervisor Christopher, "so we stole the name of the fastest thing in SF, the instantaneous communicator in the novels of Ursula Le Guin." Only later did they discover that it's an anagram of "lesbian", which amuses their customers greatly and frequently.

Asked whether PCWs were used to prepare the manuals for their PCW software, both members of Ansible's product documentation section shuddered and said, "Do you think we're mad? What do you use to produce 8000 Plus, eh?" Our reporter made an excuse, collected his mac, and left. ■

# Arnor's 1989 PCW Software Sale

## PROTEXT ... The Word Processor

Protext is now firmly established as the alternative to Locoscript.

All the features you would expect from a good word processor - many text editing commands, print commands, spell checking and mail-merging. The refinement and thought that has been put into the program - logical keystrokes and commands, clear layout, speed and power ... all go towards making Protext ideal for the novice or the experienced user.

- \* On-screen help \* Typewriter mode \* Insert or overwrite typing mode \* Word count \* Undelete feature
- \* Move/copy/delete/print blocks of text \* Box manipulation \* Configuration \* Personal dictionaries \* Exec files \* Two file editing \* Keyboard macros \* File conversion \* Comprehensive Find & Replace \* Foreign languages and accents \* Program editing mode \* Proportional printing, right justified \* Conditional printing and loop constructs \* Print any number of copies \* Works with any printer \* Calculator \* Print labels \* Use the maths/string functions to produce personalised invoices etc \*
- \* Compatible with PCW 9512 \* Enhanced spelling checker - larger dictionaries, dictionary on drive M or on program disc \* Many improvements based on customer feedback \*

*"Protext deserves to be the system by which all other word processors are judged ... a superb product"* YOUR COMPUTER

*"The great strength of this package is its ease of use"* CWTAC

*"Protext is the solution to all Locoscript's drawbacks"* PCW

*"Makes Locoscript look like a snail"* 8000 PLUS

*"Simply the best word processing program to date for the PCW ... Locoscript is effectively dead"* PUTTING YOUR AMSTRAD TO WORK

Protext is also available in German at £59.95 (Prowort)

## ... The Book

At long last an independently produced book about Protext, written by Rob Ainsley.

The book features a large section of tips for easy reference and is well illustrated with screen shots and printouts.

It also includes a section written to help the Locoscript user to 'convert' quickly to Protext.

It is an essential purchase for any current or potential Protext user whatever their word processing experience.

**Protext - A PCW User's guide**

192 pages, illustrated paperback

**Price £9.95 + £1 post/packing**  
(Post/packing is free if buying a piece of software)

### Special Offer - Save £20

Buy Protext together with the book for £49.90 and save £20 off RRP.  
(RRP £59.95 + £9.95 = £69.90)

**Protext + Book £49.90**

## New low prices for CP/M languages

### MAXAM II

Complete CP/M machine code development system

- \* Macro assembler \* nested conditional assembly \* file inclusion \* textual substitution of macro parameters
- \* repeat loops \* Full expression evaluation \* Error listing to screen/file/printer \* 8080 mode \* Linking facility \* Create object files for use with C \*

Window based monitor, with:

- \* line assembler \* disassembler \* memory editor \* find string \* relocate \* move memory \* compare memory \* fill memory \* bank switching \* symbolic debugger \* single stepping \* set memory limits for stepping \* stack checking \* conditional breakpoints \* trace mode \* edit registers
- \* Editor is program mode of Protext (as for C) \*

*"Maxam II - now the best gets even better"* CWTAC CPC

*"A really excellent piece of software which, given the speed with which debugging can be done, will pay its way very quickly"* ACU

*"The thing that struck me ... was the amount of thought and effort that has gone into this product"* CWTAC CPC

*"Maxam II is stunning ... the most complete and competent programming package around. Simple, speedy and sophisticated"* AMSTRAD ACTION

**RRP £49.95**

**Sale price £24.00**

### C

Complete C development system

- \* Full implementation of K&R standard \*
- \* Optimising compiler \* Floating point arithmetic \* 32 and 16 bit integer arithmetic
- \* I/O and maths libraries \* Conditional compilation \* File Inclusion \* Macros
- \* Linker accepts C and assembler (with Maxam II) \* Stand alone generator produces COM files

Protext compatible editor:-

- \* fast and easy to use \* on screen help
- \* two file editing \* keyboard macros \* fully configurable \* powerful find and replace
- \* exec files \* compile from inside editor

*"Very good value for money"* AMSTRAD PCW

*"Streets ahead in terms of programming power"* AMSTRAD ACTION

*"In typical Amor fashion, they've taken their time and got it right"* AMSTRAD COMPUTER USER

*"All the facilities necessary to write complete applications programs"* POPULAR COMPUTING WEEKLY

**RRP £49.95**

**Sale price £24.00**

### BCPL

Flexible, fast, general purpose programming language.

Extensive set of I/O libraries including access to CP/M routines. Example source files supplied, including full screen editor and all the libraries. Comprehensive 60 page manual covers the language and gives details of the libraries.

*"Easy to use, yet both flexible and powerful"* CWTAC

*"Good library of procedures ... very fast"* 8000 PLUS

*"Amor's clear, concise manual will have you programming confidently very rapidly"* AMSTRAD ACTION

**RRP £24.95**

**Sale £12.00**

All programs run on PCW8256/8512, CPC6128

*Releasing your micro's potential...*

Arnor Ltd (EP), 611 Lincoln Road, Peterborough, PE1 3HA. Tel: 0733 68909

Fax: 0733 67299

All prices include VAT, postage and packing. Access/Visa/Cheque/Postal Order.



# LISTINGS

Sines, sport and messages scrolled. Write 'em and smile.

## FRENCH BOWLS

By Noweed Mubarak

**W**hat with the proximity of 1992 and all that we felt it was about time to go continental. As if by telepathy Noweed Mubarak came forward with this stab at French bowls or Boules as it is known abroad. The listing is short, to the point and one of the simplest yet possibly most addictive we've seen in some time.

The idea of the game is to throw a ball at an angle of between 20 and 90 degrees. Your computer arm is given a power rating or between 1 and 10. If you decide to change the angle after inputting it merely enter a power greater than 10. Both choices are then reset to zero and you start again. Points out of ten are

scored depending upon how close you get your bowl to the jack.

You have five attempts to hit your target. At the end of each 'session' a percentage and points rating is given. The author assures us that a 100% score is possible. With each new game the jack is placed at a different distance from the player. The rest is up to your skill and judgement.

Because of the brevity of the listing, we prefer them that way as it happens, quite a few additions can be made in order to spruce

it up. For example, as soon as you finish one round of five balls the program ends and you are forced to type RUN for a new game. The addition of an option to continue might be of help. If you wanted to be really clever you might like to add wind speed and direction effects or the brave among you could even program a slope on the playing area.

Aside from these suggestions French Boules is an shining example of the enjoyment which can be achieved with just a very few lines of Basic and a PCW.



For the cold winter nights, a summer game to refresh the memory.

```

10 REM    ** PCW French Bowls **, by Noweed Mubarak
20 n=0: m$=CHR$(27)+CHR$(1): z$=CHR$(27)+CHR$(4)
30 PRINT CHR$(27)+"E"+CHR$(27)+"Y"
40 DEF FNats$(x, y)=CHR$(27)+"Y"+CHR$(x+32)+CHR$(y+32)
50 a=PEEK(64504!): RANDOMIZE a: PRINT FNats$(25, 0) STRING$(90, 95)
60 PRINT FNats$(24, 1)";": FNats$(25, 0) CHR$(144);
70 PRINT CHR$(143); CHR$(144); FNats$(26, 1) CHR$(133)
80 t=INT(RND*80)+5

```

```

17A1
11D7
0889
137A
1BB6
1410
1392
07BA

```

Each of the graphics characters are defined, for example the player's bowl is CHR\$(27)+CHR\$(1) in line 20.

```

90 PRINT FNats$(26, t)CHR$(27)+"r" z$CHR$(27)+"u": FNats$(27, t)CHR$(94)
100 FOR g=1 TO 5: PRINT FNats$(0, 0)"Score :" n$: n=0
110 PRINT FNats$(1, 8) SPC(5); FNats$(2, 8) SPC(5)
120 PRINT FNats$(1, 1);: INPUT "ANGLE :", d: INPUT " POWER :", s
130 IF s<1 OR s>10 THEN 110
140 IF d<20 OR d>90 THEN 110

```

```

14F3
16B9
1298
1A37
0AC5
0B05

```

The user defined function FNats\$ is put to good use in setting up the playing area. You are asked for the details of your throw.

```

150 x=(n*(90-d)*s/2742.6)+3: y=INT(SIN(n/100)*d*s/2)/17
160 IF y<>wq OR x<>wq THEN PRINT FNats$(25-qw,wq)" "
170 IF 26-y>26 THEN PRINT FNats$(26,x)m$:GOTO 190
180 PRINT FNats$(25-y,x)m$:q=w:y=w:x=n+s+5:GOTO 150
190 sc=10-(ABS(t-INT(x))):IF sc<>ABS(sc) THEN sc=0
200 ns=ns+sc:NEXT go
210 PRINT FNats$(15,20)"You're score is: ";ns; ", average: ";ns*2;"%"

```

13A6  
18F7  
14B1  
18DD  
1701  
0A3D  
1CE6

The trajectory of the ball is calculated in line 150 and you get to see just how close you got.

## LISFIG

By H F J Callan MBE

French mathematician Jules Antoine Lissajous grabbed the fame in the late 1800's from American Nathaniel Bowditch. The latter had first discovered what came to be known as Lissajous figures. Jules Antoine, however, delved just that bit more deeply. Now you will be able to see the shapes which fascinated both men come alive on your monitor.

Lissajous figures are produced by the intersection of two sinusoidal curves (the curve of sines represented as  $(y=a \sin x)$ ) the axes of which are at right angles to each other. This program reproduces Lissajous figures in which the relative frequencies and phase angles may be set.

In laypersons' terms the program produces some very attractive patterns on the screen of the PCW. It enters the pantheon of Mallard Basic listings which bring numbers to life alongside the Mandelbrot generator and A M Baldwin's Surfaces program. Many regular readers of Listings Plus will recognise Larry Simons' Plot routine which begins in line 5000. If you already have this you only need type in lines 10 to 290. Those of you new to these pages should type the whole program but the bonus is that once you have the Plot routine you can re-use it for your own ends.

Mr Callan gleaned his knowledge of these interesting curves from his work as an electrical engineer where he spent time working with oscilloscopes, sine waves and such like. He tells us that he has more such programs in the pipe line.

The present program will produce its shapes in a few minutes, if not seconds. So other programs may well benefit from graphics in the form of Lissajous figures without much loss of speed.

Setting the frequency ratio to 1 and the phase displacement to 90 should give you a circle, 1 and 180 will give a diagonal line. But changing the parameters even slightly will light up the screen with fabulous creations. The program itself is cleanly laid out and was accompanied by detailed documentation...just the way we like it.

Ratio of second frequency to first  
(e.g. 1=same freq; 2=twice freq,etc.)...? 2.00  
Initial phase displacement  
between frequencies in degrees...? 90

Do you want another figure? Y or N



For the cold winter nights, a summer game to refresh the memory.

```

10 REM LISFIGS.BAS by H F J Callan MBE
20 pi=3.14159
30 e$=CHR$(27):c$=e$+"H"+e$+"E":o$=e$+"f":r$=e$+"e"
40 GOSUB 50000:PRINT c$:PRINT:PRINT:PRINT:PRINT:GOSUB 220
50 a$="":PRINT c$,o$: f#=1:flag=0
60 PRINT"Ratio of second frequency to first"
70 INPUT"(e.g. 1=same freq; 2=twice freq,etc.)...? ",f
80 PRINT:PRINT"Initial phase displacement"
90 INPUT"between frequencies in degrees...? ",z

```

11F4  
04C3  
0E2C  
1E8E  
0D66  
187F  
17FF  
183D  
1942

Well packed code. The machine code routine in set, the clear screen and cursor-on cursor-off are defined and user inputs are accessed.

```

100 ad=z*pi/180:a%=5
110 r=a*pi/180
120 x%=>120*SIN(r)+320:y%=>53*SIN(f*r+ad)+120
130 IF flag=0 THEN GOTO 180 ELSE 140
140 IF a%>360 AND x%=>c% AND y%>d% THEN 190
150 GOSUB 170:a%=>a%+1:GOTO 110
160 PRINT c$,r$:END
170 CALL plot (x%,y%,f%):RETURN

```

077F  
05DA  
100A  
0F73  
0E92  
0BCF  
07F0  
0F2C

This is where the lines you will see on the screen are plotted. The Lissajous figure is positioned in the middle of the screen by line 120.

# ASTROLOGY for beginners

Teach yourself astrology using your Amstrad

Buy a Starter Pack comprising a simple program to calculate a horoscope, an introductory booklet and 2 self-teaching programs (how to interpret the horoscope).

ONLY £12.50 No previous knowledge required  
For ALL Amstrads (CPC, PCW, PC, PPC)

Payment by Access/Visa, Cheque, P.O. Please state make of computer or send s.a.e. (about 9" x 7") for free catalogue giving details of our wide range of programs for PROFESSIONAL ASTROLOGERS including complete natal interpretations and forecasting.

Also I CHING, GRAPHOLOGY, BIORHYTHMS, etc.

## ASTROCALC

(Dept 8000) 67 Peascroft Road, Hemel Hempstead, Herts HP3 8ER England. Tel: 0442 51809

## PCW OWNERS IN THE NORTH EAST

WE STOCK THE LARGEST RANGE OF PCW SOFTWARE IN THE AREA  
PCW UPGRADES AND REPAIRS

### NOVEMBER SPECIAL OFFERS

Microdesign 2 (New Version)	.....	£59.95
10 CPC 2 Maxell Disks	.....	£22.95
Amicas (4 disks) 10C12 F2 sl	.....	£3.99
Classic Print Revision 2	.....	£0.40
3 Drive Head Cleaner	.....	£3.99
B256 Upgrade to 8512	.....	£180.00
PCWWS256 Memory Upgrade Kit	.....	£55.00
PCW Dust Cover	.....	£3.99
Mini Office Pro Plus (8512, 9512)	.....	£34.95

## MICROTYNE

(FORMERLY DIXONS COMPUTER CENTRE)  
Leases Arcade, Leases Park Road,  
Newcastle on Tyne

TEL: (091) 261 4088

All prices include VAT and carriage



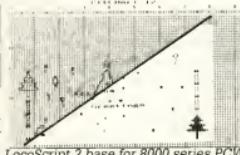
Print your own templates with **PitCharT** A4 and Personal Organiser planning grids

A4 in all Pitches - incl. doubles ★ ★ ★ Pers. Org. in P15 & 17



Every dot on its spot.  
Every space in its place

Use as a design base



LocoScript 2 base for 8000 series PCWs

With CaleNDiC and PitCharT Calculator

ALL ON 10" 3" DISC £10 POST FREE

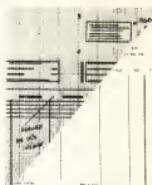
Print your own Calendars -

A4 and Pers. Org sizes - until 2000

Send cheque/PO to: John Fisher, 10 Broadwater Close, Woking, Surrey, GU21 5TW

Ideal for designing document layouts, leaflets, letter headings

Ideal for colour separation



Simple converter to calculate all pitch measurements

# LOOK!

# New Low Prices

ALL PRICES INCLUDE VAT & 1<sup>ST</sup> CLASS DELIVERY

## GAMES

### NEW LOW PRICES

High Hikers Guide	£24.95
Midnighters	£18.95
Catch 23	£18.95
Armageddon Man	£18.95
Top Gear	£18.95
Clock Chase '89	£18.95
Bridge Player 2000 with Tutor	£12.50
Heathrow: Southern Belle	£12.50
Cyrus Cross II	£12.50
Fairlight II	£12.50
Batman	£12.50
Heads Over Heels	£12.50
Matchday II	£11.95
Scrabble	£15.50
Tom & Jerry	£15.50
Knight Orc	£18.50
Leather Goddesses of Phobos	£18.50
Computer Chess	£18.50
Steve Davis Snooker	£18.50
G.Gooch's Test Cricket	£15.50
Strike Force Hammer	£16.50
Jumpin' Jack Flash	£12.50
30 Clock Chess	£12.50
Trivial Pursuits	£16.50

## CF2-3" DISCS £20.95

All branded and 100% Certified

## LOCOfILE

£24.95

Maxell CF2	Double Sided for Single Drive	10 off
Maxell CF2	D (Individually packed)	22.95
Amstrad CF2	Double Sided for Single Drive	10.90
PCW DS-DD	Double Sided for Single Drive	10.90
Amstrad 3" DS/DD Ind. Cased	.....	39.95
Amstrad 3" Storage Box (10 Cap.)	.....	9.95
Lockbox 3" Storage Box (40 Cap.)	.....	9.95
3" Disc Drive Head Cleaning Kit	.....	5.95

## DUST COVERS £9.95

8256/8512/9512 ..... Specal

Anti-static, Water proof, Creamy, Cover Set for Monitor, Keyboard & Printer

PC15512/1640 (2pc's) .. £11.95 PC2008 (2pc's) £12.95  
PC2280 (2pc's) .. £14.95 PC2388 (2pc's) £15.95

## MISCELLANEOUS

2 Way CEN36 Switchbox .. £19.95

Quickshot II Joystick .. £15.95 2 Way Serial 025 .. £19.95

PCW 8512/9512/1640 .. £11.95 4 Way CEN36 .. £19.95

Speed King Microswitch .. £10.95 Switchbox .. £29.95

Parallel Serial Interface Printer Cable .. £17.95

Q25/CEN36 .. £7.95 4 Way Serial 025 .. £19.95

Printer Cable .. £17.95 Mouse Pad (Soft) .. £5.45

Q25/CEN36 .. £7.95 Mouse Pad (Hard) .. £5.95

Printer Cable .. £17.95 Thicker Rubber) .. £5.45

Mouse Pad (Strong) .. £5.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3.95 Thicker Rubber) .. £5.45

Mouse Pad (Thin) .. £3



```

180 C%=X%:D%=Y%:FLAG=1:GOTO 150
190 PRINT:PRINT:PRINT"Do you want another figure? Y or N
200 WHILE A$="":A$=INKEY$:WEND
210 IF A$="Y" OR A$="y"THEN 50 ELSE 160
220 PRINT:PRINT TAB(25)"Program to produce Lissajous figures
230 PRINT:PRINT:PRINT:PRINT TAB(30)"Press any key to continue.
240 WHILE D$="":D$=INKEY$:WEND:IF D$<>"" THEN RETURN
                                         0DAD
                                         2219
                                         0D96
                                         0F00
                                         22A8
                                         2321
                                         1862

```

The Plot routine which is set up by the machine code is called by the program in order to display the sinusoidal curves on the screen.

```

50000 MEMORY &HBFFF: PLOT=&HC000:A=Plot:E=0
50010 RESTORE 50100
50020 FOR F=0 TO 14:S=0
50030 FOR G=0 TO 7
50040 READ X$:X=VAL("&H"+X$)
50050 E=S:X:POKE A,X:A=A+1:NEXT:READ X$
50060 IF E<>VAL("&H"+X$) THEN E=E+1:PRINT "ERROR IN LINE";10*(F+5013)
50070 NEXT:IF E=0 THEN RETURN
50080 PRINT E;"ERROR";IF E=1 THEN PRINT ELSE PRINT"E"
50090 STOP
                                         1461
                                         079D
                                         08EC
                                         06C7
                                         0A18
                                         12A8
                                         1DF0
                                         0E7A
                                         19A3
                                         03FE

```

This section of the program checks to see whether you have typed the machine code in correctly and then creates Plot itself.

```

50100 DATA 0A,32,7C,C0,4E,23,46,21,250
50110 DATA CF,02,A7,ED,42,D8,ED,43,4AF
50120 DATA 78,C0,EB,5E,23,56,7A,A7,41B
50130 DATA C0,93,3D,5F,ED,53,7A,C0,469
50140 DATA F3,ED,73,7D,C0,31,9D,C0,51E
50150 DATA 01,36,C0,CD,5A,FC,E9,00,403
50160 DATA ED,7B,7D,C0,FB,C9,2A,7A,50D
50170 DATA C0,29,11,00,B0,19,5E,23,24A
50180 DATA 56,7B,B6,F8,CB,27,CB,12,47E
50190 DATA 47,7B,E6,07,B0,5F,2A,78,360
50200 DATA C0,45,7D,E6,F8,6F,EB,19,4D3
50210 DATA 78,B6,07,3C,47,AF,37,1F,2ED
50220 DATA 10,FD,47,3A,7C,C0,A7,20,391
50230 DATA 05,78,2F,A6,77,C9,3D,78,347
50240 DATA 20,03,B6,77,C9,AE,77,C9,407
                                         0B50
                                         0CEF
                                         0CA4
                                         0C66
                                         0C7D
                                         0C54
                                         0D45
                                         0AF6
                                         0C50
                                         0BED
                                         0CB2
                                         0CDB
                                         0BDC
                                         0C1F
                                         0C16

```

*Not a great deal to say about all this code except that you have to get it right or it won't work. Once you have it you can use it again and again.*

## How to type in Listings

First get Mallard Basic running. Put a copy of your CP/M system disc in the drive and type BASIC at the A> prompt.

BASIC has been loaded when the A> disappears to be replaced by ok. Now you're ready to type the listings as they appear line by line. Don't bother with the four figure hexadecimal numbers which appear at the end of each line; these are check digits (generated by the Check2 program in issue 37).

Once you've finished typing a line check it for typing errors. When you're certain everything is correct press [RETURN]. Use the cursor keys and [DEL] to alter a line if there are mistakes. If you spot an error after you've moved on you can type EDIT followed by the line number. Edit the line using the cursor keys and [DEL] as usual. Press [RETURN] and the altered line will be

accepted in the corrected form.

When you've finished typing the program you should type LIST. This will print the listing on the screen. If you want a paper copy, type LLIST. Now, think up a file name such as "a:LISFIG.BAS". The .a at the end tells Basic to save the program in ASCII form. The filename should be no longer than eight letters. To save your program type SAVE followed by the filename you chose.

The next thing to do is type RUN. If the program runs first time you're in luck. If not, don't worry, it happens to us all. Basic will probably give you an error message with a line number. This might not be the exact line but it will narrow down the search. If all else fails - read the manual.



# SCROLL

By D Watson

Scroll is another of those handy little tools which brighten up other listings. While queuing in the post office you may have seen one of those machines which

sends a message skidding across a thin screen. This in essence is Scroll.

The idea is useful and the execution tight. You end up with a small 'window' in the middle of the PCW screen. Across this travels a message of your choice. The message itself can be up to 255 characters in length. This restriction relates to the maximum length of a string variable in Mallard Basic.

Happily, Scroll is not one of those programs which requires you to slam the [STOP] button in order to curtail its activities.

It makes use of the INKEY\$ function in order to escape its interminable scrolling. Once again this is more a program to be included in others. You might like to merge Scroll with the French Bowls listing to provide the latter with an escape routine which announces your score!

## HING IS FUN FOR EVERYONE...EVERYT

Your name in lights at last? Well pixels actually but they keep on going for as long as you require.

```
10 REM ***** Scrolling title2 routine D. G. WATSON *****
20 PRINT CHR$(27)+"E"+CHR$(27)+"f"
30 INPUT "What is your message :a$"
40 PRINT CHR$(27)+"E"+CHR$(27)+"f"
50 x=25:y=15:d=40
60 l=LEN(a$)
```

```
1A11
0F3R
1140
0B3F
0667
0481
```

Nothing too complex here. The screen is cleared, your message requested and the box is for the scroll is defined.

```
70 WHILE INKEY$!=""
80 a$=RIGHT$(a$,1)+LEFT$(a$,1)
90 b$=LEFT$(a$,d)
100 PRINT CHR$(27)+"Y";CHR$(32+y);CHR$(32+x);b$
110 FOR a$=1 TO 100: NEXT
120 WEND
130 PRINT CHR$(27)+"e":END
```

```
082R
0AFO
0570
11F4
0A9C
03EF
09BA
```

The PCW awaits your command. INKEY\$ can keep it or kill it. The message is parcelled up for printing in lines 80 and 90.

This month we are looking at the rather strange but useful LEFT\$, MIDS and RIGHT\$ functions. The main purpose of these is to extract a defined number of characters from a string of characters; which can be a word or group of words (a string expression). Before diving deeper into the explanations you should get Basic running and type in this short listing:

```
10 INPUT "What is the date (DD/MM/YY)
":date$  
20 PRINT "The day is "LEFT$(date$,2)
30 PRINT "The month is "MIDS(date$,4,2)
40 PRINT "The year is " RIGHT$(date$,2)
50 END
```

We'll look at the program line by line.

**Line 10:** Simple enough. It asks you for the date. Make sure that the slashes are in the right place and that numbers such as nine are entered as 09.

**Line 20:** We see how the LEFT\$ function extracts the first two (leftmost) characters from the date. It needs to know which string to get it from, in this case the variable **date\$**. It also needs to know how many characters to be extracted. So we tell it take the first two. **LEFT\$**, always reads from left to right.

**Line 30:** This is MIDS in action. Slightly more data is required by MIDS. Because the variable might be any length from one to 255

Would you like to get to grips with Basic? Do you find the manual too technical or just plain confusing? Then The Learning Curve is for you. Each month we set out to examine one of the many fascinating features of the Basic programming language.

The way we achieve this is with short, simple listings. These are usually no more than 5 lines long. So, it should only take you a very few minutes to enter a listing. Once you've done this the copious explanatory text will take you through the 'code' line by line. If you stick with the Learning Curve you should find that after only a few months you will have built up a wide Basic vocabulary.

characters **MIDS** needs to know where to begin extracting; in this case the fourth character from the left. We then tell it to extract only the following two characters.

**Line 40:** **RIGHT\$** does its job in a similar way to **LEFT\$** but this time reading from right to left. As you see it takes the first two characters from the right.

**Line 50:** This finishes the program.

Once you have seen what the three functions can do you might like to play around with the number of characters they will take. Do this by altering the numerals in the brackets. In the case of a database the ability to look for key letters rather than whole words can be invaluable. To illustrate this point and to introduce you to next month's topic which will

be **DATA**, type in the following and run it in Basic.

```
10 INPUT "What initial do you require ";$  
20 FOR Initial=1 TO 5
30 READ b$  
40 IF $=LEFT$(b$,1) THEN PRINT b$  
50 NEXT Initial
60 DATA
HANK,HARRY,FRANK,LARRY,FERGUS
70 PRINT "That's all folks ":"END
```

Once you get it running you will see how the search is achieved using **LEFT\$** in line 40. The first letter of each name is checked against the letter you put in and if there is a match the whole name is printed out. Don't forget to check out the Learning Curve next month.

# THE LEARNING CURVE

## Können Sie uns Auskunft über Ihre neuen Erzeugnisse geben?



Computing Services Ltd.

Are you ready for?

1  
9  
9  
2

Does this sound Double Dutch to you?

1992 will bring great opportunities for British companies, but those who have staff with a good knowledge of foreign languages will be better placed to take advantage of these opportunities than those who do not.

We have carefully designed a special language learning package for business and professional personnel. BUSINESS FRENCH, BUSINESS GERMAN, BUSINESS SPANISH and BUSINESS ITALIAN will enable you to learn the relevant material at your own pace - which means rapidly.

Topics covered include:

- Business vocabulary
- Technical vocabulary
- Business Letters
- Telephone vocabulary
- Social Phrases/Formal Greetings
- Hotel/Restaurant/Travel

At only £49.95 this represents unbeatible value.

HOW TO ORDER: Please send cheque for £49.95 or telephone giving credit card details.

APEX COMPUTING SERVICES LTD., DUKE HOUSE, 33 WATERLOO STREET, HOVE BN3 1AN



Tel: (0273) 727 477

24 hours

Price includes VAT, p&p.

Enquiries from overseas welcome



## CP/M DISC SERVICES

We offer a variety of services for users of the PCW, 6128, CPC and most other CP/M machines.

### The Best of the Public Domain

A range of excellent and tested P.D. software for every purpose. Languages, utilities, games, databases, text editors, and many, many more. Fully documented.

### Format Translation

We will copy your files from one CP/M disc format to another, or from IBM-PC or BBC formats to CP/M, and back.

### Disc Salvage

If your valuable data gets lost because of disc problems - don't panic. We can probably get all or much of it back.

For FREE catalogue please send a S.A.E to  
PCW Software Library,

11, Oldway Way, Angmering, Sussex BN16 4HQ

## DATA - ACCESS

### Printer Ribbon Re-inking Service

Have your FABRIC printer ribbon fully re-inked by the experts and save £££'s.

Our guarantee - send your used FABRIC printer ribbon plus payment and we will have it in the post and on its way back to you within 48 hours of arrival on our premises

**Black - Brown - Orange - Blue - Green - Red - Purple ribbons all re-inked in original colour**

**Trial Offer** only £1.60 per ribbon (send as many as you wish, we will even pay postage both ways!)

Send ribbon(s) plus payment to: Data - Access (Dept 8+) FREEPOST, LLANELLI, DYFED. SA15 1ZZ (no stamp required)

>> Ribbon re-inkers to Educational & Local Authorities <<  
(Special prices 1" Industrial - Commercial ribbons)

(77 Penyfan Road - LLANELLI - DYFED SA15 1JG)

APPLICATIONS  
FOR THE COMPUTER  
IN YOUR HOME

*Powerful and user friendly systems to help you get in control of all aspects of personal finance - the only systems that integrate your income and expense accounting with your personal balance sheet. Analyse where your income comes from and goes to - keep track of the balance of all your accounts, allowing for credit cards and standing orders - have instant access to your personal balance sheet - keep full records of the history of your investments...*

For full details, write to:  
VITAL Software,  
Dower House,  
Oxon Hoath,  
Tonbridge,  
Kent TN11 9SS.

0732-810-330

VITAL  
SOFTWARE

### Income Processor

- No software limit to the number of Financial Accounts, Income or Expense Groups or Categories;
- Sophisticated Standing Order Processing - monthly, quarterly, half yearly or annual payments post automatically, and there is provision to trap those awkward ones, like the rates, with an end date;
- Complete flexibility to choose accounting periods - not everyone's life revolves round calendar months;
- Use the system to budget and compare the outturn with the budget, accounting period by accounting period;
- Use the Income Processor for project management too - move and do up a house without ending up with a large overdraft and an undecorated house!

### Savings Processor

- Build and maintain your own personal balance sheet, showing all your assets and liabilities;
- Keep a complete account history of each of your investments, showing your capital gain;
- Print out a statement of all your different portfolios;
- To keep your balance sheet right up to date, you can even import the latest balance of all your INCOME PROCESSOR financial accounts.

*"User-friendly" - "Fun" - "Easy to use" - "It's excellent software" - "A remarkable achievement" - "Very pleased" - "Working perfectly" - "I never expected to find doing my accounts to be a pleasure" - "Excellent value" - "An asset to any PCW owner"...*

- All accounts named as you wish - no need to remember complicated codes

....And they couldn't be easier to use... £39.95 each, including VAT

# TIP OFFS

Tips  
Questions

Had enough of hard returns?  
Hacked off with hex? Never  
fear TipOffs is here to help.

Tip Offs, information technology at its very best. Why? because you get the information which adds to your technology. This month we bring you posters, printers, Protect and passwords among a plethora of others. If you have a tip or even a question then we have a few pounds, sterling that is, of incentive, to write, that is. The astute recipients this month are, Sue Jones for her LocoScript grids and Nick Morice-Jones for his Stop Press pixel pointers.

## The great escapes

**T** You published a letter from B. Priestly of Slough about getting the PCW to pause and/or clear screen whilst running SUBMIT files. He advocated writing programs to do this and then incorporating them in your PROFILE.SUB file. Although this works there are CP/M dodges you can use instead. Clearing the screen is very easy indeed. All you do is include the following line:

**^E^H**

The arrow is obtained by **[EXTRA]-U**. The PCW interprets the two characters 'a' as a single ESCAPE code. CHR\$(27) in Basic does the same job. Both characters can in fact be obtained by pressing the **[EXIT]** key. Mr Priestly suggests writing this in Pascal but with the Turbo version the minimum COM file size is 8k. This will do it in 1k!

If you would like to make your existing SUB files clear the screen here's how to do it. Using PIP.COM type the following:

**PIP F.SUB=CON:;PROFILE.SUB**

The section before the comma reads anything typed in at the keyboard to F.SUB. The section

following adds this new file to the beginning of your present SUB file. Remember that when entering information directly from the keyboard into a file using PIP.COM you are unable to delete. So type the following line with care:

**^A^E F1**

Then type **[EXTRA]+Z** to finish. Pausing the PCW is a little more complex. SUBMIT.COM allows user input for information such as dates and user group changes.

If it prompts for information which is not supplied, the PCW will stop until it is. By prompting for the user number in a SUB file we can pause the machine:

**:Test file for SUBMIT.COM**

**:Sorry about the ?**

**:;[RETURN] when asked for User use \$1**

**:Here is an another.**

**:Use S2**

**:end.**

It should be noted that anything typed after the ; will be printed on the screen. Aside from this each line is treated as a command.

**Robert Milne**  
**Twickenham**  
**Middx**

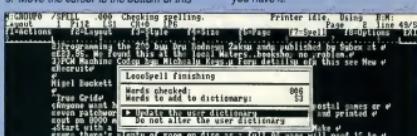
## Dr Johnson's Joy

I'm very pleased with my PCW9512 except for one snag. As hard as I try, I just can't update my User Dictionary. I'd be very grateful if you could help me out with this one.

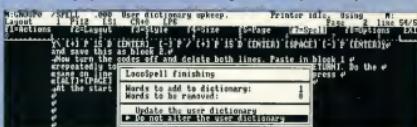
**Anne Cherchian**  
**London**

**8000 PLUS** Upkeep of the LocoScript User Dictionary is simple. Here's how:

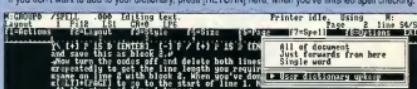
1. Create a document.
2. Press F7 to bring up the LocoSpell menu.
3. Move the cursor to the bottom of this



Right, you've finished the actual checking. Now to add to your dictionary.



If you don't want to add to your dictionary, press [RETURN] here, when you've finished spell checking.



Hit [ENTER] here to begin the tidy process.



The word hants had preceded hex. Pressing [+] puts it into the box. Pressing [-] again deletes hants.



Pressing [+] over disassembler puts it in the box for editing. Press [-] again to put the new version back.





**AMSTRAD**

## COMPUTER REPAIRS

We repair Amstrad models 464, 664, 6128, 8256, 8512, 9512, PC1512 and Amstrad Monitors.

All repairs carry a 3 month warranty.

★ Maintenance now available in West London ★

**PHONE US NOW FOR DETAILS**

## SUREDATA

DEPT4, UNIT 6  
STANLEY HOUSE  
STANLEY AVENUE

TELEPHONE: 01-902 5218 WEMBLEY, MIDDX HA0 4JB

### Bradway Software (SP)

#### LETTA-HEAD PLUS

The most versatile PCW utility for designing and printing your own business & personal stationery: letterheads, receipts, orders, labels, posters etc. Create the design on screen, select the required format & print all the copies you need.

- Library of 15 different fonts and the integral font editor. All characters proportionally spaced in a grid of 81 sizes. Screen windows may be inverted, scrolled & erased
- Enclose any area in a box of any thickness. "Graphics" lines, arcs, circles & shade for logo design. "Icon" editor for any inclusion of symbols. "Print headings" in a choice of 18 sizes. "Design labels to 4" x 2" in size. Price £16.00

#### WORDFINDER

As fast help for all you crossword and word game enthusiasts! WordFinder gives you on line access to a large vocabulary to aid those jaded memory cells.

- 19,000 unique words & 5,000 proper names. "Word lengths of 3-12 characters.
- Search by word, skeleton e.g. g\_y. "Simple retrieval of plurals, adjectives & adverbs. "Superb anagrammer; input more letters than target or less letters than target (for Scrabble cheats).
- "Addit" utility to add extra words to the dictionary. Price £13.00.

Prices include P&P within Europe. Please add £2 per program world wide airmail postage.  
"Hilfset", Upper Padley, Grindelford, Sheffield, S30 1JA

Phone (0433) 30799

OVER 4000 USERS

# STOCK MARKET

THE COMPREHENSIVE INVESTMENT PROGRAM!

STOCKMARKET is a program designed to help you plan your investments and keep a close and careful watch on their progress. It enables you to record full details of your purchases and sales of stocks, shares, unit trusts and other securities. Dividends can be recorded as they are received. If required, cash balances in savings accounts can also be monitored as stocks are bought and sold. It also lets you record and plot prices of shares, unit trusts, exchange rates, indexes etc.

STOCKMARKET does not have to be used only with your real investments. We all see shares recommended in a newspaper or magazine that we think will do well. Six months later if the price has gone up we wish that we had trusted our judgement. If the price has fallen we quietly forget it. With STOCKMARKET you can record details of as many shares folios as you want. These can include hypothetical folios of "hot stocks", recovery shares, penny share or whatever you choose. You can practise buying and selling shares and see how well you do!

The program is easy to use and comes complete with a comprehensive manual and demonstration files including real price information going back several years for several shares (inc FT 30 Index, British Telecom, Amstrad, Marks & Spencers) so that you can plot graphs straight away.

#### PORTFOLIO MANAGEMENT

- Practise buying and selling and accurately record your progress.
- Up to 200 shares per folio (many folios can be like).
- Buy and sell shares with automatic calculation of dealing costs.
- Ten sets of dealing costs which you can adjust as necessary.
- Record dividend yields and price earnings ratios.
- Update prices and automatically recalculate share and folio values.
- Record tax credits (not CPC) and dividend payments.
- List one year's information for the tax man (not CPC).
- Keep records of your cash as you buy and sell.
- List your present folio, past transactions, dividends and cash accounts.

#### PRICE ANALYSIS

- Record values of share prices, unit trusts, indexes, exchange rates etc.
- Store up to 260 prices per share (equivalent to weekly prices for 5 years).
- List up to 200 shares.
- Plot prices and moving averages on a logarithmic or linear scale.
- Choose any period for moving averages. Plot them separately or superimpose them on the price.
- Automatic scaling of graphs so they always fill whole screen.
- Easy to read scales for prices and dates (not just week numbers).
- Complete with real weekly prices for several shares for the last few years (inc FT 30, British Telecom) as a demonstration.
- Use curves as a guide to the best buying and selling opportunities.

Comprehensive fifty page manual. Complete with demonstration account and prices.

**AMSTRAD PC, PPC, IBM PC and compatibles £39.95**  
**AMSTRAD PCW £39.95**

(AMSTRAD CPC (disc) £29.95)

Prices are all inclusive worldwide. Send cheque or phone any day (including weekends) from 8am to 9pm and quote credit card number for immediate delivery by first class post.

38 Balcaskie Road, London, SE9 1HQ. Tel: 01-850 7057

## 3" CF2 DISCS FROM £1.70 EACH DELIVERED

(nothing more to pay\*)

Quantity	5	10	20	50	100
Bulk CF2 3"	£9.95	£18.95	£35.95	£87.50	£170.00
Maxell CF2 3"	£11.95	£19.95	£39.00	£95.00	£185.00
Rigid Plastic Library Cases	£2.50	£4.95	£8.95	£19.95	£35.90

All Discs Guaranteed

Store and Protect your 3" Discs in Individual Rigid Plastic Cases

3" Disc Drive Head Cleaning Kit £4.95

**DON'T** throw away your used fabric printer ribbons  
- re-link them for only 95p each / £1.75 per 2"

**S.A.E. for  
FREE  
Catalogue**

**FREE**

**Only £3.95 per Disc  
- Price includes a  
New 3" CF2 Disc\***

## PUBLIC DOMAIN SOFTWARE, 70 Discs in Library

G101 Printmaster: Design & Print greetings cards, calendars, signs, letterheads, diary pages & stationery.

B104 Keith Simons Collection: Over 25 useful programs, educational, business & entertainment.

G104 Games Collection: Well over a dozen entertainment games, Battleship, Hangman, Flyrake, Mastermind, Solitaire and many more.

L102 TITR Pascal: Once a commercial product but now in the Public Domain - 2 Discs.

U110 Disked! It: Fully featured disc sector editor & more!

U107 PCW - Desktop: Calculator, Memopad, Appointment Calendar, Database, Home Accounts & Label Printer, all menu driven.

G104 Disk Pictures: A collection of over 100 DTP software. State what DTP program you use.

PLUS: Programming languages, 10 discs of utilities, databases, assemblers, graphics & basic programs, games, communications & tutorials. S.A.E. for catalogue.

## DISC FORMAT TRANSLATION SERVICE

3" - 3 1/2" - 5 1/4" CPM - MS-DOS. Only £3.95 per Disc\*

Laser Printing from 25p per page. Complete Desktop Publishing Service

## PCW-World

Cotswold House, Crodley Heath, Warley, West Midlands B64 7NF

Call 0384 66269 anytime

\* For orders under £25 please add 51. Post & Pocking



**MERIDIAN**  
software



## Drawing on experience

**T**I am responding to Nigel Bickerton's query in issue 36 (September 1989) regarding the use of non-PCW printers and GSX. I use an Epson LQ850 24 pin printer in nine pin mode with no problem using the GSX printer driver DDFXH8.PRL. The following steps should allow anyone to use a 24 pin printer with any GSX compatible functions such as DR Draw and DR Graph. Do remember to work with backups when using SID.COM.

Load CP/M and copy the files SID.COM and DDFXH8.PRL to drive M:. Then:

1. Set the default drive to M:
2. Invoke SID.COM.
3. At the # prompt type

GUILDFORD  
SPEAKING  
CLUB

This can be achieved with GSX and some effort.

## Code comfort

**T**For some time I have been interested in Z80 assembler language for the PCW. I have read the articles published in 8000 Plus which recommended various assembler/disassembler programs. However I can't seem to find the following information:

1. A book containing the full Z80 machine code set.
2. A full PCW memory map.
3. A complete guide to CP/M showing its resident place in memory.

**Nigel Buckett**  
Marchwood  
Hants

**8000 PLUS** Literature on Z80 code is widely available. Some of the most highly recommended are:

1) The Amstrad CP/M Plus by Andrew R M Clarke and David Powys-Lybe. Published by MML Systems Ltd, 11 Sun Street, London EC2.

2) Programming the Z80 by Dr Rodney Zaks, published by Sybex at £23.95.

3) PCW Machine Code by Michael Keys. For details of this see *A New Recruit*.

EDDFXH8.PRL to edit this file. 4. You will see these lines:

**NEXT MSZE PC END**  
**3C90 3C90 0100 DAFF**

5. With the return of the # prompt type: **SW1C46** this is the Substitute Word command and sets the first address to Hex 1C46. As each address is shown, the value currently held there will be displayed. You simply type in the new value and press [RETURN] or simply [RETURN] if

you don't wish to alter anything. Type a full stop to finish. The full list of addresses, current values and substitutions is as follows:

1C46 0557 473  
1C48 0004 [RETURN].  
1C4A 00B0 D4  
1C4C 0000 .  
#W24PIN.PRL

0076h record(s) written.

Copy the new file 24PIN.PRL to disc using PIP.COM and finally edit the GSX file ASSIGN.SYS to replace the driver DDFXH8.PRL with 24PIN.PRL. You can use RPD,BAS, LocoScript or any text editor to do this. Once this is done you have a 24 pin compatible system.

**Michael Gorman**  
Guildford  
Surrey

```
>>>sid
CP/M 3 SID - Version 3.0
NEXT MSZE PC END
3C90 3C90 0100 DAFF
1C46 0557 473
1C48 00B0 D4
1C4C 0000 .
#W24PIN.PRL
0076h record(s) written.
>>>
```

Using SID to edit the printer driver.

```
PRINTER Document 2:SESSION.SYS 18 00:00:00
File Edit Document 2:SESSION.SYS 18 00:00:00
11 0:0076h
11 1:00B0D4
11 0:0000
11 0:0000
#W24PIN.PRL
0076h record(s) written.
```

```
PRINTER Document 2:SESSION.SYS 18 00:00:00
File Edit Document 2:SESSION.SYS 18 00:00:00
11 0:0076h
11 1:00B0D4
11 0:0000
11 0:0000
#W24PIN.PRL
0076h record(s) written.
```

and after. The new 24pin file is installed.

## It'll RUN and RUN

**T**Some hard won ideas in Basic:

1. Save your programs in ASCII using the syntax:

SAVE "MYPROG".a. Then when you want to list one program while writing another all you need to do is this: TYPE MYPROG.BAS. By the way in this second command there are no need for quotation marks.

2. Here's a trick to pause a listing or give your finger a break while zapping aliens: Pressing [PTR] will freeze most programs. To get back to what you were doing just press [EXIT].

3. To abandon printing press [STOP][PTR][STOP][EXIT]. This stops the printing and ensures that the printer buffer is empty.

4. If you like printing out long program lines the following will stop Basic from inserting extra carriage returns:

WIDTH LPRINT 255.

You could save this as a program on its own with a name like W.BAS. Then use

SETKEYS.COM to call Basic with one of the function keys [F1], [F2] etc. If SETKEYS is a bit beyond you then simply put W.BAS into your PROFILE.SUB.

5. If you have margins set at say positions 5 and 79 typing the following will show on screen how it should look on paper: WIDTH 74. Typing WIDTH 90 will return the screen to normal.

6. When debugging a program there are a number of ways of to avoid deleting lines or files by mistake. Save things temporarily on M:. Don't delete a dubious line, instead put a REM statement at the beginning.

Finally if you do need to move lines just give them a number like 10000 and move them to the end of the program. As long as you have typed END before this line you will be all right.

7. Arrow left on the keypad will repeat the last line written.

8. To write a similar line to one already in the program use EDIT. Changing the line number doesn't effect the original and it also gives you a duplicate.

**Steve Mayer**  
Poole Dorset

## A new recruit

**T**Having recently switched from the CPC to the PCW I have a few questions. Is there any way of protecting a program in Basic so that no one else can list it?

In Basic when I print a listing on continuous paper I still get the 'Waiting for Paper' message from the command line. I have tried changing the Paper Out Defeat but this doesn't appear to work. What can I do?

I would like to know if there are any books which deal with graphics on the 8256. Do you have to use GSX to build routines and merge these with Basic programs?

**John Sunderland**

Nelson

Lancs

**8000 PLUS** Protecting Basic listings is simple. All you need to do when saving the program is this: **SAVE "PROB8".P**. The p following the command stands for protect. Once done anyone trying to examine your listing will be confronted by the message 'Improper argument'. The only problem with this is that you won't be able to list them yourself!

To avoid the 'Paper out' message all you need to do is use PAPER.COM in CP/M. Include this line in your PROFILE.SUB file **PAPER C**.

The graphics question. GSX is a customised system fit for those with plenty of time as well as a great deal of patience. You have to write GSX routines and merge them, as well as going through an initialisation routine which creates a customised BASIC/GSX.

For some people this can be fun and GSX will certainly add to Basic; however, GSX is slow and rather cumbersome. This probably accounts for the fact that very few other packages are compatible with it.

One piece of software of interest is 'All You Ever Wanted to Know About Graphics the Universe and Everything on the PCW 8256/8512 But Were Afraid To Ask'. This will set you back £24.95 from CP Software and contains some very powerful graphics tools: not only that, it's also quite fast. Phone them on (0933) 823-463.

You might also like to make use of the Plot routine printed in Listings this month or the more detailed Draw routine published in issue 33.

As far as books are concerned 'The CP/M Plus Handbook' published by Heinemann and priced at £14.95 has a GSX supplement.

Finally, we can also strongly recommend Michael Keys book 'PCW Machine Code' which has two chapters devoted to graphics.

It is available at £15 from Spa Associates who can be contacted on (0937) 843-855.



## GOOD DTP STARTS HERE

**NEW!** MD CLEARTEXT for users of MicroDesign II. This specially designed font collection produces exceptionally clear 256K pages on the dedicated PCW printer. £13.50.

### AMAZING! LATE EXTRA

— the complete newsletter production system for users of PCW Stop Press. Vastly improved text presentation in legible fonts. £19.50 in CF2 or CF2DD format.

**CLASSIC!** DESIGNER STUBBLE for users of The Desktop Publisher. The definitive production system for a greatly underrated program. Provides an excellent practical grounding in DTP skills. Issue One £17.50 (CF2) or £15.50 (CF2DD). Issue Two £17.50. Combined edition £32.50 (CF2) or £27.50 (CF2DD).

### EXEMPLAR DESIGN, P.O. BOX 683, BATH BA1 1XU

Proprietor: J. B. Evans, 20 Grosvenor Place, Bath BA1 6AX

**GREAT  
GIFT!**



### 'MM3' cut-sheet LOCATOR & ALIGNER for PCW 8000 Printers

Architect designed. British made. Quality throughout!

Load cut-sheets spot-on, fast! Save time, paper, money! No guesswork! Use letterheads, forms etc. < 100gms. Multi-pass print! Fix arms anywhere. Four pitch scales. Easy to fit, adjust, use.

"MM3 is so simple...so effective. Beautifully designed and built with the money."

"Micromat" August 88

"MM3 revolutionised teaching word processing, improved GCSE results in keyboard applications."

Mrs. M.R. (Tewkesbury) September '88

"I would like to order MM3 as I'm sick of friends who've got one and boast at my wasted paper!"

Mr. P.F. (Birmingham) August '88



**£12.50**

incl. VAT & p+p

SIMPLY — THE BEST!

## "MARGIN MAKER"

Or send addressed sticky LABEL + REMITTANCE made out to:

"MARGIN MAKER"

Dept. 8 Box 121 Gresham Rd., Staines, Mx, TW18 2AJ, UK. ☎ (0784) 452677  
Reg. Design. No. 304337

**VIDI - PCW**  
High Performance with Low cost  
Still only **£99.95** inclusive.

For the AMSTRAD  
PCW Computer.

**Video Image Digital Interface -PCW**

VIDI captures pictures from Video or Camera directly into your own computer. VIDI images can be printed out or saved and imported into Art or D.T.P. packages.

**Special Offer to 8000 PLUS readers**  
**SAVE £20 - Now Only £79.95 Incl.**

VIDI is made in SCOTLAND by ROMBO Productions, 6 Fairbairn Rd, Kirkton North, Livingston, Scotland, EH54 6TS Telephone (0506) 414631

## NEW IMPROVED DESIGN WITH NEW CONFIGURATION OPTIONS, AVAILABLE FOR THE PCW 8256, PCW8512 & PCW 9512. FULLY COMPATIBLE WITH LOCOSCRIPT 1 & 2

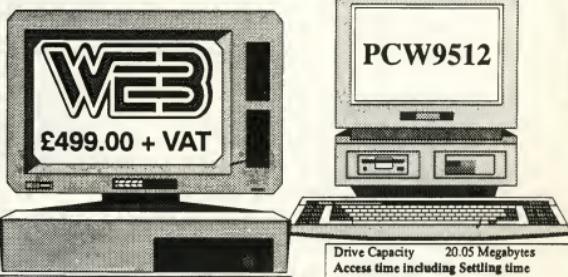
Supplied with: - NEW HARD DISK CP/M & LOCOSCRIPT, BACKUP SOFTWARE (TO FLOPPY DISK A: or B:), PARK UTILITY TO ALLOW EXTRA PROTECTION WHEN WEB IS IN TRANSIT, USER MANUAL, FORMAT & PARTITION SOFTWARE

The software for the 1.2 series WEB has been completely rewritten in consultation with Locomotive Software and therefore has no restrictions with regard to CP/M and LocoScript. The software provided allows you to partition the WEB in any of the following ways.

- 1) 1 drive of 20 megabytes as drive C:
- 2) 2 drives of 10 megabytes as drives C: & D:
- 3) 1 drive of 15 & 1 drive of 5 as drive C: & D:
- 4) 1 drive of 10 & 2 drives of 5 as C:, D:, & E:
- 5) 4 drives of 5 megabytes each as C:, D:, E:, & F:

### LIFE AFTER THE PCW

As we use industry Standard parts you will still be able to use your WEB if you change computer in the future to a PC or compatible.



Drive Capacity	20.05 Megabytes
Access time including Settling time	
Track-to-track:	16msec
Average:	75 msec
Maximum:	120 msec
Start up time:	8 sec typ; 15 max

60 West Street, Fareham,  
Hampshire, PO16 0JN  
Tel: 0329 239953 / 236727  
Fax: 0329 237 051



VISA



is now available for *all* Amstrad PCW models.

It is designed to allow anyone to examine, copy and recover information from damaged or corrupted discs. Although Toolkit is a full-function disc editor, you don't need to be an expert to use it! The manual too is comprehensive but straightforward, and includes features such as a 'First Aid' section for quick answers in an emergency.

PCW Toolkit costs just £24.95

*How much is YOUR data worth?*

**MFU** for PCW8256 and PCW9512 £49.95  
Universal Multi-format Utility. Allows the PCW to emulate other CP/M formats, analyse discs, transfer files from other systems and much more.

**2in1** for PCW8256 and PCW9512 £49.95  
Transfer files to and from IBM-PCs on disc, format PC discs on the PCW

**5.25" Disc Drives** for PCW8256 and PCW9512 £139.95  
for PCW8256 £169.95

All prices INCLUDE V.A.T. and Postage to U.K. and BFPO addresses.  
Please write or phone for our catalogue; overseas enquiries welcome.

**MOONSTONE**  
computing

Strathclyde Business Centre  
Clyde Street  
CLYDEBANK G81 1PF  
041 - 941 - 3120

## Laser Typesetting

Our new improved service brings low cost laser printing and typesetting to the PCW and PC user from £1 per sheet. *Ideal for books, reports, etc.*

Wide range of **type styles** and **sizes**.

Phone or write for full details.

### LASER IMAGES

39 Belle Vue Terrace · Sandbach · Cheshire · CW11 0NR  
TELEPHONE (0270) 760531

also Disc Conversions from £5

## SIGNWRITER

Quality lettering  
from your PCW

**£29.95**

Many extra fonts (£5.75 each plus disk), e.g.:

**& # DECO Chat Com Cril**

Also:  
PAPERBASE De Luxe for bibliographies  
LABELWRITER for product labels  
OXSTAT for statistics  
COLOURED RIBBONS

**WIGHT SCIENTIFIC**  
Dept. 8P  
44 Roan Street  
London SE10 9JT  
Tel. (01) 858 2699

## HSV COMPUTER SERVICES LIMITED

23 Hampstead House, Town Centre, Basingstoke RG21 1LG (8000)

ALL OUR PRICES INCLUDE CARRIAGE & VAT

**HSV**  
Personal  
Organiser  
Stationery  
85gsm  
£7.95  
for 250 sheets

### Stationery . . . Stationery . . . Stationery . . .

	500	1,000	2,000
9.5" x 11" 60gsm Micro-Perf all edges	-	£9.50	£15.95
True A4 70gsm Micro-Perf all edges	£8.50	£12.95	£23.95
True A4 90gsm Micro-Perf all edges	£9.75	£14.95	£27.95
True A4 100gsm Micro-Perf all edges (coloured - Cream, Blue, Grey or White)	£16.95	£31.95	-

	1,000	2,000	4,000
Labels 3.5" x 1.5" (1 across)	£5.25	£9.50	£17.95
Labels 3.5" x 1.5" (2 across)	£5.75	£10.50	£19.95
Labels 4.0" x 1.5" (1 across)	£5.75	£10.50	£19.95
Labels 4.0" x 1.5" (2 across)	£6.75	£11.95	£22.95
Labels 2.75" x 1.5" (3 across)	£4.75	£8.50	£15.95

### Cleaning Products

3" Disk Cleaning Kit.....£2.95  
PCW8 Printthead Cleaning Ribbon.....£6.95  
PCW9 Printthead Cleaning Ribbon.....£6.95

Amsoft 3" disks (uncased): One £2.75; Five £13.00; Ten £24.95

Maxell 3" disks (uncased): One £2.50; Five £11.95; Ten £22.95

Maxell 3" disks (cased): One £2.85; Five £13.50; Ten £25.95

### Printer Ribbons...

PCW8512/8256 Fabric	£3.25
PCW8512/8256 Carbon	£3.95
PCW8512/8256 Colours*	£4.95
PCW9512 Fabric	£2.95
PCW9512 Carbon	£2.95
PCW9512 Colours**	£4.95
PCW9512 Print Wheels	£5.95

### Dust Covers

PCW8256/8512 3pc Set	£9.50
PCW9512 3pc Set	£9.50
Seal and Type Keyboard Cover	
PCW8/PCW9	£10.95

### Credit Card Hotline

**(0256) 463507**

**Faxline**  
**(0256) 841018**



BARCLAYCARD

VISA

Orders under £8 in value carry a small order charge of £2

\*Red, Blue, Green, Brown, Purple, Orange. \*\*Red, Green, Brown.

your copy of is in some way corrupt. If this is true of your master discs as well, Amstrad should replace them under warranty.

As far as your comment about resetting the PCW is concerned; once the PCW is turned off all the information in memory is lost. Make sure that you are saving your work to disc every ten minutes or so, or invest in a battery back-up.

You can turn off your PCW monitor without losing data using a small battery back-up box which fits into the serial port at the rear of your machine. It will cost you a few pounds but save you the worry. There are several of these back-ups on the market. Isenstein sell them for £34.95 and are on (0244 320-240). This won't help if you have to reset the machine since a reset clears the memory by writing over it.

### Pixel packing mama

**T**On the Stop Press system disc is a demonstration file for creating blank discs. I wondered how easy it would be to create such labels for audio cassette cases. Because the image on the screen is actually larger than the printed result,

### The truth writ large

**T**I enclose a poster which I have just made up using Letta-Head Plus. It is possible to use the Link function to print sections one on top of the other instead of separate pieces as I have done. It does illustrate the capability of the program to print out even larger posters should they be required.

Originally I had problems producing a double height and width poster. I found that I could print double height easily enough but getting the width proved troublesome. The reason for this is that the PCW printer isn't wide enough.

To get around this I saved the

sizing was obviously the main problem.

I managed to measure the pixel size of these labels as they appeared on the screen. I then worked out a formula for calculating the size of any labels I could wish to design. The formula is as follows:

Simply type in **CD00** and [RETURN] to alter this area, then type a full stop and finally save the file on another disc with the command **#WJ216LOCO.EMS**. This version of LocoScript tests for the presence of the A: drive. On finding the drive it sets the flag, convincing itself that a B: drive is fitted. Nice bit of trivia.

**J**ohn Eggeling  
Todmorden  
Lancs

**J**1216  
M:16 3 SID - Version 3.0  
NEXT M:32 PC END  
NEXT M:32 0100 DRAFT  
359A C001 00  
359A D10C -

Invoke SID.COM to edit the GSX driver

**J**1216  
M:16 3 SID - Version 3.0  
NEXT M:32 PC END  
NEXT M:32 0100 DRAFT  
359A C001 00  
359A D10C -

Altering the information at 359A from C001 to C000.

**J**1216  
M:16 3 SID - Version 3.0  
NEXT M:32 PC END  
NEXT M:32 0100 DRAFT  
359A C001 00  
359A D10C -  
#J1216LOCO.EMS  
#359A C001  
You will then see this:  
#359A C001

Job done. The new file is written to a new disc.

poster to disc. I then used the erase facility to clear those sections of each screen which had been printed. Erase, allows you to position a box over the required area(s) in order to clear them with accuracy. The next thing to do was use the Scroll function to bring those areas which haven't been printed over to the left of the screen. I saved these screens to disc under a new name in order to re-produce the poster at a later date. All in all I ended up with six files for later use.

The final action was to send each saved section to the printer. All I had to do then was stick the different parts together.

**D** W Stokes  
Launceston  
Cornwall



The results of Letta-Head labouring into the night. Large print and clear definition.

1 "X" pixel=0.209mm or 119 pixels to the inch.  
1 "Y" pixel=0.459mm or 54 pixels to the inch.

If, like me, you don't think that you

will be able to remember the formula simply print it on the label of your working disc.

**Nick Morice-Jones**  
Chatham Kent

### Keys to Mini Office

**T**One of the more irritating aspects of Mini Office Professional's Manual is the lack of information relating to keypresses. What

actually does happen when you press [ALT]+[SHIFT]+?

In order to clear up this mystery I have put together the following list of both [ALT] and [EXTRA] key combinations.

**Rick Johnston**  
Belmont

### MINI OFFICE PROFESSIONAL The Shift/Alt Alphabetical Controls

Type of Control	Effect
<b>P</b> rinting	Hold print
<b>P</b> rinting	Condensed characters
<b>P</b> rinting	Double height field or string definition
<b>P</b> rinting	Print area
<b>P</b> rinting	Marker deleted
<b>P</b> rinting	Redundant
<b>P</b> rinting	Italic printing
<b>P</b> rinting	Indicates left margin or central all lines
<b>L</b> ine Spacing	"Middle" or "center" a single line
<b>L</b> ine Spacing	New page character inserted
<b>P</b> rinting	Overline
<b>P</b> rinting	Page number inserted
<b>P</b> rinting	Page number
<b>P</b> rinting	Superscript or subscript
<b>P</b> rinting	Indicates line height
<b>U</b> nderline	Character
<b>V</b> line Spacing	Vertical line spacing or height of lines
<b>V</b> line Spacing	Wide character
<b>P</b> rinting	Switch to printing/preview output

### Extra Alphabetical Controls

<b>A</b> lpha	A word count
<b>A</b> lpha	Prints date and blank
<b>D</b> ate	Prints current date
<b>F</b> orm	Follows form of or prints to the line number or phrase
<b>G</b> roup	Group line number entered
<b>G</b> roup	Group marker
<b>I</b> nter	Integer marker moves
<b>M</b> arker	Joined marker moves
<b>R</b> egospace	Forwards current control character
<b>L</b> ine Change	Line marker changes
<b>L</b> ine Change	Marker lineated
<b>D</b> elimiter	Marker character i.e. current marker deleted
<b>F</b> orm	Form of line followed by line number or prompt as G in next line
<b>G</b> roup Change	Substitutes case
<b>Regospace</b>	Translates parts copied
<b>V</b> erage	Groups case changes
<b>C</b> hange	Groups case changes
<b>M</b> arker	Prints the end of your text or the end of your current class marker

All you ever wanted to know about Mini-Office keys and didn't know where to look. You do now.

**DATA LINE COMPUTING SERVICES**  
For Quality, Reliability and Service  
fast delivery - low prices

Database	Leisure	Science
At Last Plus	£31.95	But men ...
Cambase 2	£39.95	Brain Clough's Football
Database II	£33.95	Clock Chess 89
Database II (A/Title)	£33.95	Classic Games 4
Locomail	£24.95	Computer Readers
Masterfile 8000	£34.95	Corruption
DT/P/Graphs	£21.95	Deluxe Scrabble
Desk Top Publisher	£21.95	Phone
Desk Top Pub & Mous	£59.95	Flight II
Stop Press	£69.95	Flight
Stop Press & Mouse	£69.95	Football
Masterpack	£61.95	Graham Gooch Cricket
Masterpack	£15.95	Head Coach
Masterfile II NEW	£24.95	Hitch Hikers Guide
AMX Mouse & IFace	£46.95	Ingrid Back
Word Processing	£16.95	Integrator
Locomail (10 fonts)	£16.95	Lancelot
Locomail	£29.95	Living Daylights
Locoscript 2	£21.95	Logo
Locoscript 2 + Locospell	£21.95	Mindfighter (6000 only)
Full Protect	£39.95	Starglider
Protect Office	£24.95	Time & Mail
SuperCalc 2 & II	£24.95	Tron
Educational	£1.95	Trivial Pursuit
Maths Mania	£1.95	World Of Soccer
Science Mania	£1.95	Space Shuttle
Biology 1&2	£16.50	Cracker II Turbo
Chemistry 1&2	£16.50	Supercalc 2
Physics 1&2	£16.50	Account
LCL Micro English	£21.95	Small Business Accs
LCL Micro Maths	£21.95	Sage Pay Accounts
The Italian Tutor	£15.95	Meridian Stock Market
The German Tutor	£15.95	Serial/Parallel IFace
The Spanish Tutor	£15.95	8 Series Compat. Fabric.
Training	£19.95	9512 Amstrad M Strike
Two Fingers To Touch Typing	£19.95	£3.65
Crash Course In Typing	£19.95	£3.65
Touch & Go	£19.95	3M DSDO 5.25" Discs
Realtime - Locoscript (9512)	£29.95	10 x £3.95
Realtime - Disease II	£29.95	AM301 Disc Box
Realtime - Scientific 2	£29.95	£11.95
Realtime - CPM Computing	£29.95	£11.95
		£14.95
		£47.95

Send 28p stamp ( refundable ) for our latest catalogue ( please state machine ).

Cheque/P.O's payable to:

DATA LINE COMPUTING SERVICES  
14 DUKE STREET WISBECH CAMBS PE13 2AS

ACCESS/ENQUIRIES

TEL: 0945 61736

ALL OUR PRICES INCLUDE  
POSTAGE AND PACKING

**FROM THE PRO-PUNTER STABLE**

**A scientific guide to Football  
Forecasting and betting**

- Pro-Pools employs the most powerful forecasting technique (E.W.M.A.), used in industry and the City, to make match forecasts for any league team game.
- The data base contains 152 Club records covering English, Scottish and G.M. Vauxhall Conference teams. Further teams, or even complete leagues, may be added by the user. Try it for your own local amateur league or if you are so inclined, for Rugby League betting.
- Fixture file sets up the program for this season's fixtures.
- Pro-Pools is completely menu driven and requires no special keyboard skills. Forecasts are displayed or printed as desired in Best Home, Away or Draw order. It keeps its own E.W.M.A. based league tables, which are available for display or printing. Compare these with published league tables, to find teams which are 'on a run' or in a decline.
- Forecasts do not depend on results from the distant past which have no relevance to present performance - you, the user, can decide how long a memory Pro-Pools will have.
- In addition to Form, forecasts include a 'Motivation' factor which represents the eagerness with which a team goes into its next match.
- Pro-Pools contains the unique 'cash counter' - an in-built accounting system which automatically evaluates different investment strategies to point the user towards the most profitable policy.
- Practise mode allows you to play matches without affecting your main database.
- Display season's fixtures for each team or all fixtures for any date.
- Full printer support.
- Available for Amstrad PCW, IBM PC and compatibles.

**PRO-POOLS ORDER FORM**

Name \_\_\_\_\_ Address \_\_\_\_\_

Postcode \_\_\_\_\_

Details of computer Make \_\_\_\_\_ Model \_\_\_\_\_ Disc Size: 3 1/2 / 5 1/4 \*

Please send \_\_\_\_\_ copy/copies \* of PRO-POOLS at £44.99 inc VAT. p.p. Total enclosed £ \_\_\_\_\_

Please make cheque payable to 'D.G.A. Software' \* Please debit my Access/Visa \* account. \* Delete as appropriate

Card No. \_\_\_\_\_ Expiry Date \_\_\_\_\_



**SuperMaths**



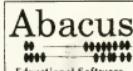
Specially written for Amstrad PCWs, PCs and compatibles. User friendly, enjoyable package: **multiplication (including tables), division, addition and subtraction - 4 levels of difficulty - ages 5 upwards**. Scores shown, success rewarded. PRACTICE and TEST (timed). WORKSHEET produces worksheets on printer with choice of styles, with separate answers.

**Can provide hours of fun  
improving numeracy**

Price (inc VAT/P&P) £18.95 (PC) and £14.95 (PCW). Cheques to:

Abacus Software, 11 Woodcote Drive, Orpington, Kent BR6 8SD

Proprietor: JD Charlton



Educational Software

**FACTOTUM**

The Servant who runs his Master's affairs



TURN YOUR PCW 8512 INTO  
YOUR MAN FRIDAY

■ ELECTRONIC DIARY - including appointments, birthday and anniversary reminders. Plus Filofax printout.

■ ELECTRONIC ADDRESS LIST - Automatically addressed letters, labels, Christmas cards, circulars, and telephone directory.

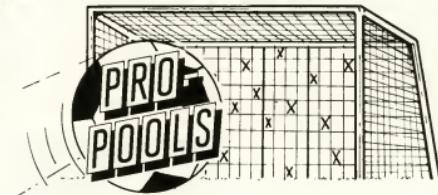
■ ELECTRONIC BUDGET CONTROL - Monthly expenditure, income tax forecasts, capital goods lists.

If you own Locoscript 2, Locomail and LocoMail, **FACTOTUM**, the tried and tested collection of specially written programmes, will enable you to get the best from your PCW8512.

Why spend frustrating hours trying to write programmes like this? Avoid all those Error messages, the bafflement and the frustration.

Please make your cheque payable to Tudor Systems. £14.95 includes VAT, packaging and first class postage. Delivery within 28 days.

**TUDOR SYSTEMS, TUDOR COTTAGE, STONEACRE LANE, OTHAM, KENT. ME15 8RJ. Tel: 0622 861775**



Price £44.99 inc VAT p & p with fixture file



**DGA SOFTWARE, PO BOX 36,  
ASHTON-UNDER-LYNE OL7 9AJ**

Telephone 061-330 0184

# The Good Software File

## Word Processors

### PROTEXT/ POCKET PROTEXT

£59.95/£29.95 • Amor • 0733 68909

The best CPM wordprocessor. Very fast at moving around large files, and packed with features. Works with key combinations rather than menus, but uses LocoScript keys too. Comes complete with a good spelling checker, a lightning fast word counter and a very powerful mailmerger. *Pocket Protext* is a stripped down version – essentially the same word processing features, but no spell checker or mailmerger, and lacking one or two incidental facilities like two column printing. Specify which machine you have when buying.

#### PLUSES - MINUSES

- ▲ Complete with spelling checker/word counter
- ▲ Packed with features, e.g. calculate facility, text editor for writing programs, two print documents at once
- ▲ Lets you work with two documents at once
- ▲ Very fast at moving around, doing exchanges and so on
- ▲ Extremely powerful and flexible mailmerger
- ▼ Forces you to learn another new set of control keys to use it
- ▼ Not as slick as LocoScript in its printer controls

### EASY LABELLER

£34.45 • M.A.S.S. • 0603 630768

Labelling program which stores your names and address list and will print out in label format selected items from it.

#### PLUSES - MINUSES

- ▲ Useful options like printing out current date
- ▲ Good search facilities
- ▲ Range of printing options will fit most stationery
- ▼ Data needs an entire disc to itself
- ▼ Data entry is slowed by constant returning to main menu

### LOCOSCRIPT 2

£24.95 • Locomotive Software • 0306 740506

As bundled with new 9512, the new version of everyone's first word processor. You can now use the keyboard to type in Greek and have a minimal need to do, and it puts right (almost) all the defects of the old version at a rock bottom price. Greek and Cyrillic alphabets, and even lets you define up to sixteen characters of your own design.

#### PLUSES - MINUSES

- ▲ 'Find page' command makes moving around faster
- ▲ Supports many foreign accents and symbols available
- ▲ Can now drive daisywheel and other printers
- ▲ Has DISCRIPT's formatting and copying built into it
- ▲ New 300 page manual
- ▼ Mailmerger and spelling checker not included
- ▼ Inconvenient for regular CPM users
- ▼ Still no word counter
- ▼ Still slow at Find, Exchange and scrolling

These pages provide a comprehensive guide to the Amstrad PCW software. Published in three monthly parts, this time it's the turn of Word Processors (including Desk Top Publishers), Accounts/Payroll packages and Utilities. We've set out to cover every important piece of software we could lay our hands on, and to give you enough information to decide whether they are suitable for you.

All software will run on both the 9512 and the 8000 series machines, though the former's daisywheel printer cannot print graphical output.

The selection isn't comprehensive, but the software listed here represents what we think is the best of that currently available.

As well as a brief summary of what they do, the main Plus and Minus points for each program are listed – Pluses have a ▲ by them, Minuses a ▼. Those we think are particularly noteworthy have a corner flash.

Have fun window shopping!

### LOCOSPELL

£19.95 • Locomotive/Amsoft • 0306 740606

The ultimate spelling checker for LocoScript users. It is run as a simple menu choice while you are editing a document normally, and you can check either an entire document or only a paragraph. When it finds an error, it suggests a correction. Reasonably fast, given LocoScript's inherent slowness.

#### PLUSES - MINUSES

- ▲ Runs directly within LocoScript
- ▲ Can do small sections of a file
- ▲ Suggests alternatives for misspelt words
- ▲ Reformats the text as it makes corrections
- ▲ Provides the much-missed LocoScript word counter
- ▼ Can't remove spellings you don't like
- ▼ The manual gets bogged down sometimes
- ▼ Slow at scrolling the dictionary window

### LOCOMAIL

£29.95 • Locomotive/Amsoft • 0306 740606

As a mailmerger for LocoScript, it's difficult to see why anything could be better than this. It runs directly from LocoScript, and can process any LocoScript commands. Has many advanced features and is highly recommended for all LocoScript users.

#### PLUSES - MINUSES

- ▲ You don't have to run it from CP/M
- ▲ Can print any LocoScript text formatting commands
- ▲ Can automatically rejustify paragraphs after insertion
- ▲ Can insert numeric and date/time letters
- ▲ Runs directly from LocoScript (in ASCII) files
- ▲ Large manual, with example files on disc
- ▲ Powerful selection procedures - like a database
- ▼ Need separate program to sort and filter addresses before a print run

### PROSPELL

£29.95 • Amor • 0733 68909

A stand-alone spell checker for use with almost any wordprocessor that runs on the PCW's. Reads LocoScript, WordStar and ASCII files, and allows you to make corrections directly, view the context, change the dictionary etc. Specify which machine when buying.

#### PLUSES - MINUSES

- ▲ Checks LocoScript and WordStar documents directly.
- ▲ Displays the content of a suspect word
- ▲ Can edit misspellings directly from Prospell
- ▲ Anagram and crossword solvers too
- ▼ Processes files of 15K or more in sections

### POCKET WORDSTAR

£49.95 • MicroPro/David Rubin • 0366 853610

For many business users, word processing means WordStar. Although you may not need it in a fast processor is here and despite the title this 'Pocket' version has all the features of the original. Efficient and proven, but now showing its age and there are alternatives unless you are committed to WordStar already. £20 extra buys the Du Lex version with spell checker.

#### PLUSES - MINUSES

- ▲ Probably the world's most widely used word-processor
- ▲ Documentation is complex but well-structured
- ▲ Includes a mail merge utility

- ▲ Keystroke commands fully described on on-screen menus
- ▼ Doesn't make full use of the PCW keyboard and printer
- ▼ Page and margin formatting commands awkward to use

### NEWWORD

£69.00 • NewStar Software • 0277 220573

NewWord exploits the WordStar market by doing the same job better. It uses much the same key commands as WordStar and even edits documents prepared under WordStar. It includes a spelling checker, and the on-screen help is slightly better than WordStar's, though the keystrokes are still as obscure.

#### PLUSES - MINUSES

- ▲ Does everything WordStar does, even reads WordStar files
- ▲ Spelling checker
- ▲ Comprehensive on-line and lines
- ▲ Onscreen help better than WordStar's
- ▲ Full reformatting of text within mailmerger
- ▼ Weak on use of keypad and printer support
- ▼ Like WordStar, formatting troubles and obscure commands

### LABEL PRINTER

£25.00 • Microdraw • 0622 685481

Very similar program to Easy Labeler if not quite as powerful. Usual features of a labeler and you can store comments with each label's data.

#### PLUSES - MINUSES

- ▲ Marus simple – easy to get the program going
- ▲ Fast and reliable
- ▲ Can store comments with each entry
- ▼ No import or export of data
- ▼ Data needs an entire disc to itself

### LOCOKEY

£14.95 • Locomotive Software • 0306 740606

This successor to LocoChar is a keyboard customiser which means that any key can be made to produce any letter. The program will reprogram any one of the sixteen LocoChar-defined characters.

#### PLUSES - MINUSES

- ▲ Enables customisation to any distribution of characters
- ▲ Handles any combinations of accent and character
- ▲ Is fun and easy to use
- ▼ Will only be of limited use

### ANSIBLEINDEX PLUS

£29.95 • Ansible Information • 0672 62576

The upgraded version of the LocoScript document index. Type in your LocoScript document as normal highlighting the words to be indexed with a LocoScript (‐RV) code. The program will then compile an alphabetical list of entries complete with the page number on which they appear. A friendly, useful little package.

#### PLUSES - MINUSES

- ▲ Don't need to convert files into ASCII files
- ▲ Word counter also included
- ▲ Runs with both LocoScript 1 and 2
- ▲ One index can be created for a series of documents
- ▲ Indexes can be edited on screen
- ▲ Index entries can be inverted; instead of 'mutton pie,' for example, 'pie, mutton.'

# GOOD SOFTWARE GUIDE

## Accounts

### MONEY MANAGER PLUS

£39.95 • Connect Systems Ltd • 01 743 9792

The souped-up version of the personal accounts package Money Manager which would serve a small business quite nicely. It acts as a daily diary, over 12 months, recording all incoming and outgoings between up to 9 accounts. Similar transactions can be grouped together, and simple reports can be printed. Money Manager also includes a bank ledger. £24.95

#### PLUSES - MINUSES

- ▲ Simple to use, need no accounts or computer knowledge
- ▲ Standing orders can be defined for each month
- ▲ Detailed and summary statements can be printed out
- ▲ VAT reports can be separated out
- ▲ Can present results as bar charts
- ▼ No audit trail integrity
- ▼ The statement format is not very flexible
- ▼ Transfers between accounts are not cross-referenced

### VITAL PROCESSOR SERIES

£29.90 each • Vital Software • 0732 810330

Series of three programs designed to help you look after your money and your assets. The Savings Processor is ideal for someone with a portfolio of stocks and shares; it tells you your 'hot worth' like a balance sheet. The Insurance Processor helps you make an inventory of all your possessions and put a value on them, while the Income Processor helps you keep tabs on your incomings and outgoings.

#### PLUSES - MINUSES

- ▲ Income Processor allows you to budget entire assets
- ▲ Insurance Processor can complete inventories room by room
- ▲ Savings Processor is a fast and efficient way of keeping track of share values
- ▼ You have to be keen to do all the research
- ▼ It can't do time-consuming calculations
- ▼ With the Insurance Processor, it's difficult getting all the information you need from the manual
- ▼ It's not always clear how some of the operations work

### CHECK ACCOUNT II

£14.95 • Molesoft • 03722 75053

Written specifically for the home user, this program maintains four accounts per family in a bank-statement form. Its analysis feature shows trends and forecasts how much you can afford to spend. The interest-estimating feature can keep track of Building Society accounts where interest earned varies with the account deposit.

#### PLUSES - MINUSES

- ▲ Designed solely for home accounts
- ▲ Easy to learn from demo file
- ▼ Relatively slow screen update
- ▼ You have to be organised to keep it up to date

### DIGITA BUSINESS CONTROLLER

£69.95 • Digita International • 0395 270273

Not a full accounting system, but a very easy-to-use package with an excellent manual. Nominal ledger already set up and you can be up and running in minutes. No aged creditor/debtor lists can be produced, and problems with VAT handling - not really for VAT businesses. For other small business it's very good value.

#### PLUSES - MINUSES

- ▲ Delight to use with a very good manual
- ▲ You can get the system working in minutes
- ▲ Financial ratios can be included in reports
- ▼ No facility for producing aged debtors/creditors list

## BOOK-KEEPING AND ACCOUNTS

£69 (with invoicing, £80.50; with invoicing and stocks, £92) • Manx Tapes • 0624 813071

Recently updated suite of programs advocating a very traditional style of double-entry book-keeping. Useful demonstration disk with more than 200 example accounts.

#### PLUSES - MINUSES

- ▲ Solid, traditional approach to double-entry book-keeping
- ▼ Program doesn't make full use of the PCW
- ▼ Screen prompts not always that helpful
- ▼ Written in BASIC, so prone to sluggishness

### COMPACT ACCOUNTS

£149.00 • Compact Software Ltd • 0703 611214

Another very large integrated package supplied on several discs and consisting of sales, purchase and nominal ledger together with invoicing. The package is available on much larger systems, but the basic format in which it is produced is the same as on PCW; the system is particularly suitable for users planning to upgrade their hardware at a later date.

#### PLUSES - MINUSES

- ▲ Audit trails are an auditor's dream
- ▲ Disk can be used in MultiStar, Multiplan or SuperCalc 2
- ▼ Separately priced facilities
- ▲ Can run a number of companies separately
- ▲ Easily transferred to bigger computers
- ▼ Lots of disc swapping necessary
- ▼ Can be slow to use - it runs in MultiStar Basic
- ▼ Quirks in cash allocation routine and account code system

### M.A.P. INTEGRATED ACCOUNTS

£125.00 • MAP Systems • 061 624 5662/3

This is a very powerful package moved onto the PCW at a fraction of its cost on larger micros. The size makes it a little cumbersome to use, but apart from that there are very few significant problems. The integrated suite includes the same five modules as Cartsoft, but they are supplied on four sides of disc, making it effectively impossible for the software to be used as an integrated system on an unexpanded 8250.

#### PLUSES - MINUSES

- ▲ A very comprehensive and professional package
- ▲ Very good audit trails
- ▲ Sales/purchase ledgers can run over different periods
- ▲ Facility for handling prepayments and accruals
- ▲ Ability to print management accounts
- ▼ The size of the programs means lots of disc swapping
- ▼ All normal responses need to be in upper case

### CORNIX SIMPLE ACCOUNTS

£49.95 • Cornix • 0462 682989

Simple cash-book style program which allows you to keep track of debtors and creditors (though not aged ones). Simple to use and you can make changes if you make a mistake. Slow to use for complex operations and number of entries in given period is limited, but very good simple program for small businesses.

#### PLUSES - MINUSES

- ▲ Simple, easy-to-use program
- ▲ Can correct errors
- ▲ Keeps track of debtors and creditors
- ▼ Slow for complex operations
- ▼ Ability to alter figures won't please accounting purists

### CAMSOFT PSIL

£149.95 • Cambrian Software • 0766 831878

Consists of five integrated packages: Sales, purchase and nominal ledgers, invoicing and stock control. In terms of sophistication it falls somewhere between the SageSoft package and the larger systems from MAP and Compact. But it's easier to run than the larger packages since all the software is squeezed into the M: drive. Good package for a small company.

#### PLUSES - MINUSES

- ▲ Already set up for 8250 or 8512
- ▲ No need for pre printed stationery
- ▲ Excellent sort and search facilities
- ▲ Invoices shown on screen as you create them
- ▼ Constant need to input full five-digit account codes
- ▼ No final accounts reports available on nominal ledger

▼ No facility to run the ledgers in different accounting periods

## IN BUSINESS

£149.00 • Cavalier Software • 01 639 6683

A comprehensive integrated package. Combines 'Inact' accounts and 'Instock' stock control, available separately for £59 each. Well designed, easy to run and powerful enough for most businesses.

#### PLUSES - MINUSES

- ▲ Other packages (eg: 'Teleaid' address book) can be added
- ▲ Comprehensive range of features when used as a package
- ▲ Sophisticated pricing and order features in Instock section
- ▲ Flexible accounts, traps most mistakes, useful summaries
- ▼ Interesting forward planning facility in stock control
- ▼ Manual gives you a confusing list of options

### SMALL BUSINESS ACCOUNTS

£69.95 • NewStar • 0245 265017

Using the split-screen method, the prompt-driven program leads you through the hazards of double-entry book-keeping as painlessly as possible. Again, very useful demonstration files supplied with the program. It also handles VAT easily.

#### PLUSES - MINUSES

- ▲ Excellent system of screen prompts
- ▲ Good demonstration files
- ▼ One of the easiest double-entry systems for the novice
- ▼ Manual is ready for the PC

### SAGE ACCOUNTS

£87 • Sagesoft • 091 213155

An integrated account package consisting of purchase, sales and nominal ledgers. For another £50 you can buy Accounts Plus which also has invoicing and stock control. Aimed at small companies with the emphasis on ease of setting up. But a number of limitations, eg, the package cannot cope easily with rapidly increasing numbers of customers and suppliers.

#### PLUSES - MINUSES

- ▲ Clean, tidy and logical screen layouts and menus
- ▲ Easy to set up and use with excellent documentation
- ▲ Good audit trails and VAT reports
- ▲ Can produce formatted trial balances
- ▼ Restrictive account number system
- ▼ Only single Nominal ledger and VAT analysis per item
- ▼ No facility for settlement discounts
- ▼ Won't print remittance advice slips
- ▼ Cramped on 9512 printer - need 17 pitch daisywheel

### M.A.P. PAYROLL

£60 • MAP Systems • 061 624 5662

#### PLUSES - MINUSES

- ▲ Can amend and re-run at any stage (even after printing)
- ▲ Can amend and re-run at any stage in different departments
- ▲ System prevents re-use or amendment of leavers
- ▲ Can hold up to 40 standard hours and weekly wage rates
- ▼ No SSP calculation facility (but can record all amounts paid)
- ▼ Programs necessitate a lot of disc swapping
- ▼ No printed record of automatic tax code changes

### SAGESOFT POPULAR PAYROLL

£61 • Sagesoft • 091 213155

#### PLUSES - MINUSES

- ▲ Any or all employees payroll can be run at any stage
- ▲ Full pay history available for all employees and leavers
- ▲ Calculates average pay for holidays etc
- ▲ Very easy to install
- ▼ Limited number of add-ons/deductions
- ▼ Doesn't print a list of cheques
- ▼ No analysis of add-ons/deductions

### COMPACT PAYROLL

£99.95 • Compact Software Ltd • 0703 611214

#### PLUSES - MINUSES

- ▲ Supplied with test data
- ▲ Facility to change employee tax codes following budget
- ▲ Can run payroll for several companies



## GOOD SOFTWARE GUIDE

- ▲ Program available for PC compatibles - data transportable
- ▼ Must be run from the memory board
- ▼ Needs input form and check calculation for each employee
- ▼ Once payrolls are printed nothing can be changed
- ▼ Most expensive payroll program

### CAMSOFT PAYROLL

£49.95 - Cambrian Software • 0763 316783

#### PLUSES - MINUSES

- ▲ Fully integrated payroll on screen, any item can be amended
- ▲ Facility for freehand narrative on any payroll
- ▲ Uses M drive for programs to speed operation
- ▲ Built in on-screen help facility
- ▲ Search-sort routine for output to screen, printer or disc
- ▲ Uses alphanumeric employee codes
- ▼ Screen listing is a bit untidy and sometimes difficult to follow
- ▼ No listing of cheques

### CHECK ACCOUNT TWO

£14.95 - Molesoft • 0372 275053

A program that has been written specifically to keep track of personal household accounts. As well as being able to store the details of up to four different accounts per disc, the program records all withdrawals and deposits and will allow an instant check on the current state of any account at any time. It also reveals the true financial position of all accounts by displaying figures which have either sunk or risen over previous or current months. Also incorporated are comprehensive interest calculating options. A solid, compact package.

#### PLUSES - MINUSES

- ▲ No double-entry book-keeping or VAT returns to worry about
- ▲ Very easy to use
- ▲ Can carry last month's spending levels forward into the next month
- ▲ Tiered interest rate option available

### EASI-ACCOUNTS SYSTEM

£23.95 - Arctic Computer Ventures • 1 Foxwell Square, Southfields, Northampton NN5 5AT

Another PCW accounts package this time for the small business man or the very organised home user. Works on the traditional system of ledgers with up to 500 entries (or individual transactions) stored per ledger.

#### PLUSES - MINUSES

- ▲ Comprehensive List and Search facilities
- ▲ Many reports can be produced showing accounting and so on, the whole, well-written
- ▼ Not a particularly easy package to use
- ▼ You would have to be exceptionally well-organised to use it

### MONEY MANAGER PCW

£49.95 - Connect Software Ltd • 01 743 9792

This accounting package has been designed for individuals, small businesses and clubs; anyone who might find a larger accounting package daunting. The program concentrates on income and expenditure, each file covering a 12-month period with up to 500 entries per month.

#### PLUSES - MINUSES

- ▲ Up to 20 different kinds of accounts are catered for
- ▲ Up to 50 transaction codes help categorise income and expenditure
- ▲ Never need a computer or accounting expertise
- ▲ Information can be displayed in the form of a bar or pie chart
- ▼ Too limited for bigger businesses
- ▼ Over-featured for domestic use

### DG PAYROLL

£39.95 (£79.95 for DG Payroll Plus) \* Digita International • 0395 270273

A computerised payroll program for the small PCW-based business which covers all PAYE, Statutory Sick Pay and Statutory Maternity Pay requirements. The package can handle up to a thousand employees and their pay requirements whether they are weekly-paid or salaried staff.

#### PLUSES - MINUSES

- ▲ Good menu arrangement
- ▲ Automatic calculation of deductions: SSP, etc
- ▲ End of year routine could save time
- ▼ Understanding and experience of PAYE is essential!
- ▼ Basic version of software needs frequent updating

# Utilities

### BRAINSTORM

£29.95 - Brainstorm Software Ltd • 0895 677845

A new improved version, reconfigured for easier use on the PCW. Works as an 'ideas processor'; you throw your ideas in any order and then use the program to rearrange them and improve structure.

#### PLUSES - MINUSES

- ▲ Quick and efficient and easy to use
- ▲ Encourages structured thinking
- ▲ Versatile; many different editing facilities
- ▲ Results can be fed into a word processor for polishing up
- ▼ Namesakes must be exact matches
- ▼ Manual is on disc, so you can't consult while using BrainStorm unless you print it out

### PCW DRAW

£39.95 - HTB Computing • 0794 516279

Draughting package written specifically for the PCW. Provides Program is teaming with features - built-in shapes and freehand drawing facility - which, used with practice and imagination, will provide professional-looking output.

#### PLUSES - MINUSES

- ▲ Very comprehensive text entry and printout format options
- ▲ ZOOM facility allows you to edit small sections of a draught pixel by pixel
- ▲ Many useful functions: different line thicknesses, hatching ...
- ▲ ZOOM facility can't be printed out alone
- ▲ No printing - DETAILS file might prove restricting
- ▼ No support for plotting devices like mouse or light-pen
- ▼ PCW Draw doesn't consider the PCW's screen aspect ratio: on-screen drawings look twice as high as wide

### PCW TOOLKIT

£19.95 - Moonstone Computing • 041 941 3120

A user-friendly data recovery package for the PCW. Provided you can find the pattern of the damaged file, roll out a new one, sector by sector, on M using PASTE.

#### PLUSES - MINUSES

- ▲ Perfect for the complete novice
- ▲ Clear, confidence-booster manual
- ▲ Can recover data varying in amounts from a few bytes to a complete disc.

### PRO-PERFORMER

£59.95 - Electromusic Research • 0702 335747

The only real musical add-on for the PCW. Easy to use software runs on CP/M, has a wide variety of musical features and is icon-driven. Sophisticated recording facilities and the program will allow you to save compositions as tracks, songs or performances. Ideal for pop and classical musicians.

#### PLUSES - MINUSES

- ▲ Good musical potential
- ▲ Can record files independently or in an arrangement
- ▲ Punch-in editing facilities
- ▲ Facility for slow recording and fast playback
- ▲ Step-time recording for strict in tempo lines
- ▲ Tracks can be looped (made to repeat)
- ▼ Manual glosses over arrangements
- ▼ Can't edit notes individually
- ▼ No musical notation anywhere

### JOB ESTIMATING & PRODUCT COSTING

£79.90 each - Comix Software • 0462 662989

Both programs aim to provide help to small businesses by keeping track of costs. You break down the product you're costing or the job you're doing into a series of costing lines - recording quantity and price per component. Program analyses profit margins and can produce customer printouts.

#### PLUSES - MINUSES

- ▲ Excellently-written manual
- ▲ Simple and robust to use
- ▲ Changes in material costings instantly reflected

#### net quotes

- ▲ Need to do is find the particular template to suit your requirements and then fit in the details. Vast selection of borders is excellent for personalising labels and envelopes.
- ▼ Can't add new components to a description

### TEMFDISC 8.2

£18.95 - Thurston Techniques (0395 277496) • 8512s only

Disc of ready-made templates to be used inside LocoScript 2. All you have to do is find the particular template to suit your requirements and then fit in the details. Vast selection of borders is excellent for personalising labels and envelopes.

#### PLUSES - MINUSES

- ▲ Has many more files to complement LocoMail's existing template
- ▲ Very easy to use
- ▲ Vast range of templates available
- ▼ Not so good if you don't like lots of visual trimmings

### FORMS BOX COMPENDIUM

£19.95 - Disc Design • 0522 40940

Fully compatible with LocoScript 1 and 2, this disc provides 70 different kinds of forms for home and office use. You can either fit them in on the screen, save and print them out or print them out and fit them in later. A solid, no frills product.

#### PLUSES - MINUSES

- ▲ Very easy to use
- ▼ Will only print out on A4 size paper

### POOLS PREDICTOR

£15.99 - Corwen Computing • 0490 2902

This program helps you to select the numbers to cross on your pools coupon taking its recommendations on the recent form of each team or simply on the basis of sequence prediction (going on the numbers which have provided the best past results).

#### PLUSES - MINUSES

- ▲ Very easy to use
- ▲ More accurate than the newspaper pundits
- ▼ Entering form results from week to week is tedious

### LOCOFONT I

£19.95 - Locomotive Software (0306 740606) • 8000s only

A selection of new fonts to help you break out of the standard LocoScript typeface. There are 100 different selected styles to choose from. Handwriting style is very good and the Copperplate and Script styles. The Roman and Sans serif fonts are more practical. The new characters are reproduced very well indeed. A further six fonts are available, including Old English and flowing script, on LocoFont II for £14.95.

#### PLUSES - MINUSES

- ▲ A wide range of fonts are available for free
- ▲ Each style supports all accents, characters, etc.
- ▲ Relatively cheap and easy to use
- ▲ Can break out of that one-pattern printout.
- ▼ Can mix styles in one document
- ▼ Limitations of a 16 dot pattern means that the quality cannot be brilliant

### TAS-SIGN

£29.95 - Tasman Software • 0532 438301

Takes time to print out but you can print signs of up to five lines of text up to seven inches high with up to 32 characters in each line (font, eight hatching patterns, and you can print lengthways or across paper for long signs).

#### PLUSES - MINUSES

- ▲ Wide range of fonts and shadings
- ▲ Long signs will print out in 'landscape' (sideways) format
- ▼ Long signs take time
- ▼ Some symbols (yen signs etc) won't print out on PCW

### GILLIGAN'S GUIDE

£25-£30 - NG Gilligan • 0629 56347

A geographic information program based on the Ordnance Survey system. Concentrates on a given area loosely 15 square miles; it will list all the places included on the map in alphabetical order with their grid references. Also gives you information about the sites and will locate them on the map. You can also interrogate the system so that it only gives

## GOOD SOFTWARE GUIDE

you details and locations of sites of special interest.

### PLUSES - MINUSES

- ▲ A thorough, versatile and easy to use package
- ▲ Some can be interrogated in a number of interests
- ▲ Breaks sites down into areas of specific interest
- ▲ You can commission your own made-to-measure guides

## STAR TRACK

£14.95 • Discovery Software • 01 840 5252

A fun and informative program with which you can display on your computer screen all of the 88 constellations and 600 or so stars that are recognised by the IAU astronomers. You can also see how their positions in the sky change depending on your location (which could be anywhere in the world) and the time (any time between 1000 and 2999 AD).

### PLUSES - MINUSES

- ▲ Excellent material with helpful practice exercises
- ▲ Comes with a file of ready-made latitudes and longitudes supplied
- ▲ Cycle option transports you forward a month at a time so that you can chart the stars' progress
- ▼ Screen displays could be more exciting
- ▼ Moon and planets aren't included

## DATA DIARY

£16.95 • 4 Ideas • 0249 815082

More PCW generated diary masters for use at home or in the office. The program works from within LocoScript so you can make use of all LocoScript's text and style enhancements. Inserts feature year to a page calendar, month at a glance planners and, page a day formats.

### PLUSES - MINUSES

- ▲ Buy it at any time of the year and you will be supplied with next 12 months' supply
- ▲ 3 versions available - for A4-size and Filofax-size printouts
- ▲ A solid, no-frills product that's easy to use

## INVESTOR

£29.95 • B & BB Software • 0240 242946

Program has been designed to assist the share-owner in the management of a portfolio and to help in the choice of shares to buy and sell. It allows up to 300 stocks, shares or unit trust investments in a library. Stocks are listed in order of their performance and you can call up graphs of price movement for individual stocks.

### PLUSES - MINUSES

- ▲ Manual is very easy to follow
- ▲ Records share-holdings, dividends and cash flows
- ▲ Dividend printout for tax purposes
- ▲ Four methods of share price analysis
- ▼ No ability to calculate taxable gains
- ▼ Graphs as small and lack expansion facility
- ▼ 9512 owners won't be able to print out the graphics

## PERSONAL TAX PLANNER

£29.95 • Digita International • 0395 270273

Simple program which asks you all the questions relevant to your year's tax affairs, and prepares your tax return claim (or bill). Can, for example, find out whether married couples would be better assessed separately or not. Annual updates are included.

### PLUSES - MINUSES

- ▲ Simple to use
- ▲ Needs a minimum knowledge of the tax law
- ▲ Forces you to keep your tax details in one place
- ▼ Limited application - might only use it once a year
- ▼ Can't handle unusual cases
- ▼ Program updates (for a new allowance level) cost £10

## KNIFE PLUS

£19.95 • Hisoft • 0525 718181

An essential tool for retrieving data from corrupted discs. Knife Plus will copy all uncorrupted sectors on to a fresh disc which you can then patch up without risking the original.

### PLUSES - MINUSES

- ▲ Copies all uncorrupted data from damaged discs
- ▲ If boot sector damaged, will copy good boot sector onto disc
- ▼ Requires some knowledge of basic disc structure
- ▼ Manual not written for beginners

## WISE ONE

£34.95 • Swallowsoft Publications • 0420 63793

An expert system - you input rules and information and Wise One becomes an 'intelligent' program which can, for example, do simple diagnoses according to symptoms you type in. From PO Box 107, Walton on Thames, Surrey KT12 5PQ.

### PLUSES - MINUSES

- ▲ Power to be genuinely useful
- ▲ Help screen can be set up for the user
- ▼ Obscure way of writing rules - need programming instinct
- ▼ Manual dry and academic

## FLIPPER 2

£29.95 • Software Imperative (0453 886901)

9512/8512 only.

Can do everything the original Flipper did - more. You can now flip Mini Office and LocoFile and will have no problems with whatever version of LocoScript you're using.

### PLUSES - MINUSES

- ▲ Easier to install than its predecessor
- ▲ Can flip between experiments in as little as 2 seconds
- ▲ Professionally-written documentation
- ▲ Works with all PCW and CPM programs, LocoScript and BASIC
- ▼ Still won't work with many self-loading games
- ▼ Be careful of state of printer and disc drives when flipping.

## SUPER TYPE II

£14.95 • Digita International • 0395 270273

A program for users of LocoScript and CPM programs, which modifies the fonts used by the PCW printer. SuperType has 4 'business' and 'novelty' fonts. It works by directly altering the relevant files for LocoScript or CPM, so you only need run it once - after that, the new characters are available.

### PLUSES - MINUSES

- ▲ Once installed, you can totally forget it's there
- ▲ Genuinely useful range of fonts available
- ▲ All LocoScript's print size and style options still work
- ▼ You can't mix different fonts in the same document

## DAATAFAX

Basic version £39.95 (with Microfile

£49.95 with mouse £79.95) • Kempston Data • 0908 677886

Used with personal ring-binder, it helps you keep track of names, addresses and appointments. Prints out data in a form that you can file or use with an organiser.

### PLUSES - MINUSES

- ▲ Flexible and easy to use; saves buying inserts
- ▼ Not very sophisticated - keeping it up to date is tedious

## DHCP 12-TRACK SEQUENCER SOFTWARE

£45 • DHCP • 0440 61207

The second add-on 'recording studio' for the PCW consisting of MIDI interface and software. Can cope with up to 12 tracks, all of which are polyphonic and which can be as long as the PCW memory allows. Can also cope with quite advanced instruments.

### PLUSES - MINUSES

- ▲ Cheaper than its competitor
- ▲ Tracks can be bounced to enable several tracks to all be recorded at once
- ▲ Looping can start/end at any bar
- ▲ Add-ons available for Casio and Korg synthesisers
- ▼ Manual is skimpy
- ▼ No editing possible without re-recording whole tracks



## FLEET STREET EDITOR PLUS

£49.95 • Microsoft • 01 928 1454

Versatile and powerful package. You can create template-like page designs and you can use several pages of the same format, and changing of font, setting of margins and size of text boxes etc. is well controlled.

### PLUSES - MINUSES

- ▲ Versatile integrated package
- ▲ Text handling and editing sophisticated and controlled
- ▲ Can set up page documents for regularly used formats
- ▼ Odd use of memory in text editor
- ▼ Still lots of serious bugs even now and crashes occasionally

## NEWSDESK INTERNATIONAL

£25 (with lightpen £50) • The Electric Studio • 0462 420222

Versatile package with a very wide range of graphics facilities and high quality headline text. Page make-up is flexible, though the program can be a bit cumbersome, mainly in text handling. Some graphics facilities as Electric Studio's 'Art' package which is superb.

### PLUSES - MINUSES

- ▲ Good control over the elements on the page
- ▲ Powerful graphics facilities
- ▲ Good quality print in headlines and large fonts
- ▲ Can use font editor to create your own high quality fonts
- ▼ Text-handling slow and cumbersome; editing is difficult

## STOP PRESS

£49.95 • Database • 0625 878888

An excellent DTP package, very strong on graphics, very well designed, and once you get used to it, it's easy to use. Sophisticated text handling features such as autoflow but can't edit text - that all has to be done in your word processor before flowing the text in. A lot of good fonts supplied too.

### PLUSES - MINUSES

- ▲ Excellent graphics facilities, good as any graphics program
- ▲ Wide range of text styles with text autoflow
- ▲ Menu and key commands system suits beginner and expert
- ▼ No text editing ability

## THE DESKTOP PUBLISHER

£29.95 • Database Software • 0625 878888

Tremendous value for money. Graphics and text boxes can be easily moved around and page layout is clear. You can edit text within the program, using LocoScript-like commands to set bold and italics. Good range of fonts and graphics too, at half price of its rivals. Mouse optional for £50 more.

### PLUSES - MINUSES

- ▲ Text editor allows you to edit articles to fit the space easily
- ▲ Books can be layout easy to manipulate
- ▲ Works with three mice, but only with keyboard alone
- ▲ Half the price of other packages
- ▲ Good range of fonts and graphics, and can design your own
- ▼ Can't fix size of text boxes - they expand to take all the text
- ▼ Headlines can look a bit jagged

## LATE EXTRA

£19.50 • Exemplar Designs • PO Box 683, Bath, BA1 1XU

A Stop Press add-on consisting of a collection of 11 fonts that cover the range of type styles and sizes needed to create a balanced page. Also supplied on disc is a 13-page publication which describes how to create your own professionally-produced publication. Now you can create a good-looking page with readable text.

### PLUSES - MINUSES

- ▲ Good range of 11 complementary fonts
- ▲ Can adapt template for own use
- ▼ Time-consuming
- ▼ Text needs reducing for best results

## MICRODESIGN II

£59.95 • Creative Technology • 0889 567160

The ultimate DTP package for sheer printout quality. Creative Technology regard the words and the graphics as being equally important, hence the program's 'integrated page processor' label. Runs on all three machines and produces very high quality results.

### PLUSES - MINUSES

- ▲ Has 256 fonts
- ▲ Easy and fun to use
- ▲ Excellent text-editing facilities
- ▲ Fully compatible with other word processor and DTP packages
- ▼ Won't run with Flipper

# COMPUTER SERVICES

Help Line (0202) 431762

All prices INCLUDE VAT & CARRIAGE  
Cheque/PO's with order please or  
phone using Access or Visa  
All orders despatched  
same day  
subject to availability

DEPT 8000, 33 Granville Road, Bournemouth, Dorset BH5 2AH

## DISKS

3" CF2 ..... Per 5 ..... £11.75  
Per 10 ..... £22.45  
Storage Boxes (Lockable) holds 30 x 3" 75

## CONTINUOUS STATIONERY

Full range available Forms Price  
Per Box Per Box

11 x 8 5  
1 Part 90GSM (M) Pt or Mikred ..... 15.95  
1 Part 70GSM (M) Plain ..... 20.00 ..... 17.95  
1 Part 90GSM (M) ..... 20.00 ..... 19.52  
1 Part 85GSM (M) ..... 1000 ..... 13.95  
2 Part 90GSM (M) ..... 1000 ..... 13.95  
3 Part NCR ..... 700 ..... 25.06 ..... 26.27  
2 Part NCR TINT (White/Pink) ..... 1000 ..... 26.27  
3 Part NCR TINT (White/Yellow/Pink) ..... 750 ..... 29.56

11.66 x 9.25 (A4 SIZE)

1 Part 90GSM (M) Plain ..... 2000 ..... 19.95  
1 Part 70GSM (M) ..... 2000 ..... 20.61

1 Part 90GSM (M) ..... 2000 ..... 23.55

1 Part 85GSM (M) ..... 1000 ..... 14.67

2 Part NCR80/57 ..... 1000 ..... 33.58

11 x 14.5

1 Part 90GSM Plain or Mikred ..... 20.00 ..... 20.02

2 Part NCR ..... 1000 ..... 27.14

3 Part NCR ..... 700 ..... 33.61

(M = Micro perf on all edges)

## LOOSE LEAF BOND PAPER

A4 90GSM WHITE Per ream £0.60/each £.76

ENVELOPES

Quality Commercial Range - low prices

Box £ Per Box

3 1/2 x 6 Manilla Gumm ..... 1000 ..... 9.28  
3 1/2 x 6 White Gumm ..... 1000 ..... 11.59  
C6 Manilla Gummmed 4 1/2 x 8 1/2 ..... 1000 ..... 13.32  
C6 White Gummmed 4 1/2 x 8 1/2 ..... 1000 ..... 16.24  
DL Manilla (Window) 4 1/2 x 8 1/2 ..... 1000 ..... 14.95  
DL White (Window) 4 1/2 x 8 1/2 ..... 1000 ..... 17.85  
DL White/S Seal (Window) ..... 1000 ..... 19.22  
9 x 4 Manilla Gumm ..... 1000 ..... 12.79  
C5 Manilla Gummmed 9 x 5 1/2 ..... 500 ..... 10.95  
C5 White Gummmed 9 x 5 1/2 ..... 500 ..... 12.89  
C5 White S Seal 6 1/2 x 9 ..... 300 ..... 15.10

(M = Micro perf on all edges)

## RIBBONS

	1 off	2 off	5 off
8256/8512 Norm life	3.95	7.45	16.95
8256/8512 Extra life	4.95	8.95	19.95
8256/8512 M/strike	3.95	7.45	16.95
8256/8512 C/strike	3.95	7.45	16.95
9512 Norm life	3.95	7.45	16.95
9512 Extra life	4.95	8.95	19.95
9512 M/strike	3.95	7.45	16.95
9512 Patriotic Colours	4.95	8.95	19.95

\* Colours - Blue, Red, Green, Brown  
We have ribbons for 100s of printers

## RONBIN REFRESH !

Unique spray allows you to re-link faded ribbon in seconds! 160ml can... £28.95

## COMPUTER LABELS

Top quality Avery Labels	2000	10000
	£	£
<b>1 ACROSS</b>		
2 3x 1 1/2	8.00	29.35
2 3x 1 1/4	9.75	36.95
3 1/2 x 1 1/2	8.00	32.55
3 1/2 x 1 1/4	10.95	42.35
3 1/2 x 1 1/2	14.90	59.45
4 x 1 1/2	9.25	34.75
4 x 1 1/2	11.45	44.30
4 x 1 1/2	8.95	33.95
4 x 1 1/2	11.45	44.30
4 x 1 1/2	15.05	59.95

<b>2 ACROSS</b>		
	£	£
2 3x 1 1/2	7.35	26.50
2 3x 1 1/2	9.75	32.55
2 3x 1 1/2	8.00	30.00
3 1/2 x 1 1/2	10.95	42.35
3 1/2 x 1 1/2	14.90	59.45
4 x 1 1/2	9.25	34.75
4 x 1 1/2	11.45	44.30
4 x 1 1/2	8.95	33.95
<b>3 ACROSS</b>		
2 3x 1 1/2	7.16	25.97
2 3x 1 1/2	8.64	31.97
2 3x 1 1/2	7.31	32.32
3 1/2 x 1 1/2	9.75	36.95
3 1/2 x 1 1/2	13.18	51.20
4 x 1 1/2	10.00	37.00
4 x 1 1/2	11.11	43.15
4 x 1 1/2	14.58	58.37

**FREE** 1000 DISPOSEABLE CUTTER  
(Worth £5.75) with every 10000 labels

## MAKE YOUR AMSTRAD EARN!

Yes making money with your Amstrad becomes incidental when you know how. Your micro is, if only you knew it, a gold mine. The size and make is irrelevant. Make the initial effort NOW by starting your own

## HOME BASED BUSINESS

This may be the most important move you will ever make!

REMEMBER: You'll never get rich by digging someone else's "ditch". Anyone in the country, including YOU, can become very rich in a relatively short period of time just by doing a few basic things! It's more rewarding than playing games. The benefits are many and varied. Full or part time. For FREE details send S.A.E. to:

## HOME BASED BUSINESS

31, PILTON PLACE (8+10)  
KING AND QUEEN STREET,  
WALWORTH, LONDON SE17 1DR

# KEYSTROKES LTD

## Phototypesetters

- Setting direct from your Amstrad disks, Loco 1 or 2 or ASCII
- Helpful service, reasonable pricing
- Page make-up, Multi column, Top quality keyline
- Over 120 faces, sizes 5 to 72 point
- Top quality setting at over 5 million dots per square inch

Expanding  
Reversing  
Condensing and  
Italics available on  
the majority of faces

Tel: Reigate, Surrey 0737 243682 Fax: 0737 294157



**Now**  
CF2 3" DISKS IN PLASTIC CASES

**£19.96** PER 10 (+VAT)

Free DISK DRIVE  
WITH EVERY ORDER  
OF 20 DISKS

**SBS** has stocks of Maxell CF2 3" diskettes in Plastic Cases. Turn to page 9 for our full colour advertisement.

PHONE: Our Express Hotline on (023) 423523 and order quoting credit card number, full postal address, daytime phone number and the dept. number, below.

POST: Simply list your order, total goods, add delivery and VAT, name and address, enclose a cheque or postal order (made payable to 'SBS Computer Supplies') or your credit card details to the full address below.

DELIVERY & INSURANCE: Supplies: 1 item—£1.50, 2 items—£2.00; 3 items (and over)—£2.50. Overseas Orders Welcome — Please contact us for delivery information.

# POOLSWINNER

THE ULTIMATE POOL'S PREDICTION PROGRAM

- **MASSIVE DATABASE**: Poolwinner is a sophisticated Pool prediction aid. It comes complete with the largest database available in the market (over 10,000).
- **PREDICTS**: Not just SCOREDRAWS, but AWAYS, HOMES and NO SCORES.
- **SUCCESSFUL**: SEGURO guarantees that Poolwinner performs better than any other program.
- **ADAPTABLE**: Predictions are given on every fixture - choose as many selections as you need for your bet. The prediction formula can be set by the user - you can develop your own unique method.
- **SIMPLIFIED DATA ENTRY**: All fixture details are in the program. Simply type in the reference numbers from the screen. Or use FIXGEN to produce fixture list automatically (see below).
- **LEAGUE AND NON-LEAGUE**: All English and Scottish League teams are supported, and also non-league sides often used on pools competitions.
- **POOLER SUPPORT**: You can keep copy printout of data if you have a printer.

PRICE £24.00 (all inclusive)

AT LAST! No more struggling for hours to get the fixture list into the computer. FIXGEN has been developed to read the fixture list from the English and Scottish League fixtures for 1989/90. Simply type in the date, and the full fixture list is generated in seconds. Fully compatible with Poolwinner. Yearly update available. POOLSWINNER with FIXGEN £26.50 (for both)

**COURSEWINNER V3**



NOT JUST A TIPSTER. PROGRAM. Coursewinner can be used by anyone to develop their own unique winning system.

**THE PUNTERS COMPUTER PROGRAM**, and can be used by anyone to develop their own unique winning system.

You can develop and test your own unique winning system by adjusting the statistics, or use the program in simple mode. Coursewinner V3 uses statistical analysis, and can predict future outcomes. It can output most likely winners, good long odds bets, forecasts, etc. The output can be used in EASYBET, or any other program. You can update the database - never goes out of date. **FULL PRINTOUT VERSION**.

PRICE £24.00 (all inclusive) includes Flat AND National Hunt versions.

**AVAILABLE FOR** **AMSTRAD CPC464**, **AMSTRAD PCW**, **BBC BROADBAND**, **COMMODORE 64/128**, **SPECTRUM**, **ATARI ST**

Please state tape or disc

Sent Cheques/POs for return of post service to...  
SBS COMPUTER SUPPLIES LTD. FREEPOST (BR332)  
DEPT. 311, PORTSLADE, BRIGHTON BN4 1ZZ.



**selec** 

SOTIWARE 

phone 24 hrs

62 ALTRINCHAM RD, GATLEY, CHEADLE, CHESHIRE SK8 4DP. ☎ 061-248 7425

Postage paid for full set of our software!

Buy either the book or the book and disc together (to save you the time of typing in the programs or short listings)

**Only £9.95**  
(plus £1.45 p&p)  
for the book  
Order Code 8602

**or £12.95**  
(plus £1.45 p&p)  
for the book and disc  
Order Code 8603

We are offering the most comprehensive compilation of Amstrad PCW Hints, Tips, Shortcuts and Useful Programs ever published.

- The most comprehensive roundup of all the LocoScript tips: making personal organiser sized paper for nothing, producing bar charts and line drawings, organising footnotes and references, four ways of printing in two columns, tricks to get the best out of your printer, typefaces that aren't mentioned in the manual, label printing, setting up your onboard calculator... and much more!
- The essential BASIC tips, including how to use the PCW's timer, time-saving shortcuts, quick reference tables, screen layouts, unprotecting protected programs, un-erasing files — and the pokes that the manuals don't tell you!
- The best inside information on Protext, Mini Office and C/PM
- DIY tricks — screen filters for free, making your monitor swivel, doubling the life of your printer and ribbons and much more!
- Plus a host of other tips including, printing in SuperCalc 2, The Logo collection, silencing Tetris and LocoScript's beep, DTP tips, using a Z88 — and the free game that's hidden in your system disks!
- Valuable BASIC listings with utilities such as spreadsheet, label printer, mailmerger, indexer, sorting routines and lots more
- 160 pages of information that will change your PCW life.

The book is based on the collected tipoffs in **8000 Plus** from issue 1 to the present day and covers every possible facet of PCW use. But it's not just a reprint — every item has been rewritten, re-illustrated and updated where necessary. Plus a whole host of new tips has been added to make this book the essential guide to PCW use.

Each tip has been written to stand alone — easily followed

A Future book

**THE  
8000  
PLUS  
COLLECTION**

The Ultimate Tips Book for the Amstrad PCW



ROB AINSLEY

The Most Comprehensive Compilation of Amstrad PCW Hints, Tips, Shortcuts and Useful Programs Ever Published



by even the newest beginner without having to read other sections first. No 'refer to the manual' or 'see the tip on page 192' here — we tell you exactly what to do, which keys to press, and what happens on screen.

We feel sure that you will quickly come to rely on this unique reference source as the new PCW owners' bible. The information it contains is truly invaluable.

Ring 0458 74011 now and order your copy quoting the relevant order code or see the order form on page 85  
Please remember that this book is not available in the shops and that supplies are limited!

SPECIAL OFFERS • SPECIAL OFFERS • SPECIAL OFFERS

# 8000 PLUS

## COLLECTION

### 1. 8000 Plus disc labels

Packet of 20 for £1

(when ordered with another product)

Spare labels for your 3" discs in four different colours—yellow, green, red, blue. Order Code 8013

### 2. Copi-Reader

This neat and easy copy holder features a unique new clip. It can be positioned on either side of the monitor, and may be swivelled into position for best viewing angle, and then to the side again when not in use.

£6.99 Order Code 8075



### 3. Highlighter Pens

Three for £1.50

For £1.50 you get green, red and yellow 8000 Plus-stamped pens in a clear plastic wallet.

Order Code 8001

### 4. 8000 plus dust covers

3 piece set for 8256/8512 only £11.95  
3 piece set for 9512 only £12.95

Protect your PCW with these specially-commissioned three-piece 8000

Plus covers.

Order Code 8005 (8256):  
...8006 (9512)

### 6. Magazine Binders

Store up to 12 issues for just £4.95

A superb gold-embossed green binder. Buy one and watch your collection grow into the definitive library of PCW information.

Order Code 8004

Buy two for £9.00 Order Code 8076

### 7. PCW Luggage

An essential addition for any PCW owners who want to ensure against accidental knocks when transporting their computer. Ideal for writers on assignment, businessmen when taking the micro to the office, or salesmen for demonstrations.

High density foam padding and a water resistant nylon exterior

make this a strong and safe piece of luggage, along with its adjustable shoulder strap and sturdy carry handles.

### 8. 8256/8512

Two separated pouches for the printer and keyboard, that then fit neatly into the large case but leave room for manuals, etc.

RRP £44.95 8000 Plus Price £35.95  
Order Code 8074

### 9. 9512

Two large cases for the monitor and printer, with a separated pouch for the keyboard that fits in neatly with the printer but leaves room for manuals, etc.

RRP £58.95 8000 Plus Price £49.95  
Order Code 8073

### 5. 8000 Plus T-Shirt

The Truly Terrific American Royal Blue T-shirt with the honour of carrying our 8000 Plus logo on the left breast. Wear yours with pride and set yourself above the rest!

Price £4.95

Medium Order Code 8071

Large Order Code 8072



● PRICES INC CARRIAGE & VAT ● HOTLINE 0458 74011 ●

# RS SPECIAL OFFERS ● SPECIAL OFFERS ● SPECIAL OFFERS



## MICRO DESIGN 2

from Creative Technology (All PCW's)

RRP £69.95 8000 Plus PRICE £44.95 or buy with the  
AMX Mouse RRP £129.90 8000 Plus PRICE £89.90

A MASSIVE SAVING OF £40.00 WHEN BUYING  
THE TWO ITEMS TOGETHER!

The latest and best DTP package.

The print quality is unbelievably good for the PCW printer. Get into desktop publishing and buy the best mouse around at the same time.

- Four times higher graphics resolution than Stop Press
- Three possible page formats

Full review issue 36

Software only Order Code 8508

Software and mouse Order Code 8509

## MASTER PACK

from Database Software (8000's only)

Consisting of Master Paint and Master Scan

**Master Scan:** attach the optical scanner to your PCW printer to enable images to be captured for use in art packages and DTP. Capture logos, diagrams, sketches, photos, maps, signatures, cartoon characters and much more. Your letters, reports and bulletins can now be illustrated to create a much more interesting and professional image. Create your own posters, letterheads, invitations or greetings cards from this menu-driven software package compiled with ease-of-use as one of first priorities.

**Master Paint:** With this package you have everything you need to produce quality, artistic, professional artwork. Create various shapes that can be filled with a choice of 16 different patterns, choose from a range of styles and fonts, use the airbrush for a more subtle shading facility.

Combine the two packages together and you can use Master Scan to produce images for use in Master Paint. Produce exciting and professional looking presentations and works of art on your PCW quickly and easily!

RRP £79.95 8000 Plus Price £56.95

Order Code 8602

## DAATAFAX from Kempston Data Products (All PCW's)

Use your PCW to organise your life with this complete personal organiser package.

- **Diary** Print your diary with four days to a page for anything from one week to a year. Then cut and paste to other parts of the diary.
- **Phonebook** The phonebook allows you to store names, addresses and telephone number either as full entries or in abbreviated format. Complete with fast search facility.
- **Notepad** Use this indispensable facility to print notes for timetables, expense sheets, bank balances, etc.
- **Calendar** Featuring a perpetual calendar, this option prints three months per page for any selected year.

## GIFTPACK (inc. binder, tabs and stationery)

RRP £49.95 8000 Plus Price £34.95 Order Code 8600

## SOFTWARE ONLY

RRP £39.95 8000 Plus Price £28.95 Order Code 8601



## TOUCH N GO

from Paperback Software  
(All PCW's)

Teach yourself touch typing from this brilliant tutorial package.

The course develops your skills on the QWERTY keyboard, and aims to produce 95% accuracy at 45 words per minute.

The UK's most popular typing tutor.

RRP £24.95

8000 Plus Price £15.95

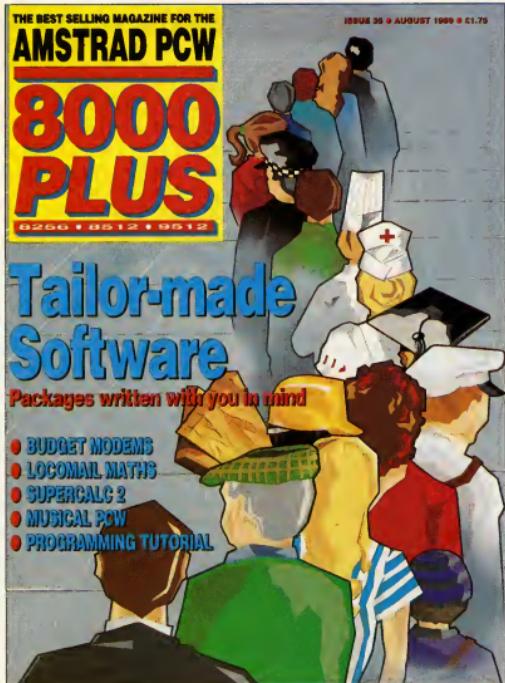
Order Code 8603

## Master PACK



PRICES INC CARRIAGE & VAT HOTLINE 0458 74011

# Subscribe now...



- 12 Issues of the magazine delivered to your door, why queue only to find out that your local newsagent has already sold out?

- **Guarantee**  
If at any time during the subscription period you are not completely happy with our service, we will refund the cost of unmailed copies.

- Receive your quarterly update of extra special offers we either didn't manage to squeeze into the magazine or that have been replaced by new ones.

... to the best selling magazine for Amstrad PCWs at only £20.95... and receive £20 worth of vouchers\* for the mail order pages absolutely FREE!

## Overseas Subscriptions (12 issues only)

Air Mail Europe £35.95 Order code 8101A. Surface Europe and Rest of World £26.95 Order code 8101S  
(For other variations call Christine Stacey on 0458 74011)

\* They give you a 10% saving on all 8000 Plus products.

● SUBSCRIBE ● HOTLINE 0458 74011 ● SUBSCRIBE ●

# SPECIAL OFFERS • SPECIAL OFFERS • SPECIAL OFFERS

## BACK ISSUES . . .

We have limited quantities of the back issues listed below. The prices include a nominal 25p postage. All issues contain excellent TipOff sections and a selection of BASIC listings, plus the other regulars. Don't miss the chance to expand your collection!

### Issues 1-16 SOLD OUT

Issue 17 £1.75 Specialist Software. Stop Press Review. SETKEYS command explained. History of computers, series..  
Order code 8032

### Issue 18 & 19 SOLD OUT!

Issue 20 £1.75 Computer filofaxes Mini Office tutorial. Add your own 2nd drive Cracker Turbospreadsheet Order Code 80020

Issue 21£1.75 New Locoscript fonts reviewed. Guide to add-ons PC?PCW link. Order Code 80021

### Issues 22 & 23 SOLD OUT - SORRY!

Issue 24 £1.75 9512 Special Report Four-page features back issues index Astrology, cricket, database reviews. DIY Graphics Mini Office book. Order Code 80024

Issue 25 £1.75 Spreadsheet special Flipper review DIY share analysis Home banking Jeffrey Archer & his PCW's GSX graphics 2nd hand PCW Guide Code 80025

Issue 26 £1.75 LocoFile exclusive preview BASIC wallchart PCW portable preview Disc doctor LocoScript books Devpac 80 2 Code 80026

### Issue 27, 28 & 29 SOLD OUT!

Issue 30 £1.75 Speech synthesiser Teach your PCW to talk back Transferring files from a PCW to a PC Lightening Basic review. Order code 80030

Issue 31 £1.75. Writing a thesis, the 'do's' and 'don't's'. Your database with Protect. Amstrad SM2400 Modem. What is C/PM Order Code 80031

Issue 32 £1.75. Astrology on your PCW. Learning C/PM. PCW User Groups. The Amstrad-Sugar story. Publishing books. Order Code 80032

Issue 33 £2.00. Four spreadsheets compared. C/PM for beginners. Five budget printers reviewed

Order Code 80033

Issue 34 £2.00. Accounting packages reviewed, the full report. Write a bestseller. The series on spreadsheets.

Order Code 80034

Issue 35 £2.00. Take a look at communications, we analyse budget modems. Play sweet music on your PCW. The PCW cut on Safari in Africa Order Code 80035

Issue 36 £2.00. Micro Design II, is this the best DTP package so far? Money Manager, the new one, fully reviewed. The full story of the Locomotive team from Dorking. The new ASF9512 from Amstrad. Order Code 80036

Issue 37 £2.00. Take a look at the jumbo ram drive for your PCW. Choose between three hard discs. Mini Office Plus, is it worth the wait? Get organised with the Psion hand held organiser.

Order Code 80037

## ORDER FORM NO.38

### HOW TO ORDER

Just list the items you require in the Order Form below or ring our 24-hour hotline on (0458) 74011 and ask for Credit Card Orders. All goods are sent by first class post, normally within five days of order. But please allow 28 days in case of temporary shortage.

#### New Subscribers please note:

The first issue of a new subscription will be one or two issues away from the one current when you place your Subscription Order.

Please send me the following items from the 8000 Plus Special Offers pages

Name \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_

Send this form plus payment to:  
SPECIAL OFFERS • 8000 Plus • SOMERTON  
SOMERSET • TA11 7PY (valid until November 30th 1989)

Order code	Title	Price
1.		
2.		
3.		
4.		
5.		
6.		

Payment is by (please circle)

Cheque • PO • Access • Visa

Make payable to FUTURE PUBLISHING LTD.

Your credit card number is

Expiry date \_\_\_\_\_

For prices and delivery times for export orders  
please call Kelly Tout on 0458 74011



PRICES INC CARRIAGE & VAT • HOTLINE 0458 74011

# POST SCRIPT

Postal peregrinations perfectly presented by perfectionists (well at least it rhymes)

This is where we let you, the readers bite (sorry, bite) back. If we're amused, annoyed or amazed you then tell us all about it - how else will we find out? On the other foot, why not have a go at amusing, annoying or amazing us? A letter in Post Script could be the start of literary fame. Send your missile (sorry, missive) whining (no, winging) on its way to: Postscript, 4 Queen St, Bath, BA1 1EJ.

## Tick offs

A propos David Langford's column in the September issue (with which I fully concur), the lack of a hyphen means that another of your regular columns is entitled incorrectly. As you will no doubt be watching your T's and Q's from now on, I look forward with great delight to a 'Tips off' column in future editions - it has a far more exotic ring to it.

Adrian Rhodes  
Manchester

**8000 PLUS** I read a very good wall recently. Reading walls is a bit like visiting the reference library. You occasionally come across a really interesting bit but then find you can't take it home with you to read the rest at leisure in the bath. This one said 'pedants of the world point out'.

## Deja Vu

I was going to write a letter to your TIPOFFS section, until I found my tip in 8000 Plus (Issue 1 October 1986 that a friend had just given me!) In the same issue there were some further good tips.

This prompts me to suggest the time has now come for you to do 'The best of 8000 Plus No 1' where you select from your past issue's tips, programs, letters and replies, etc edited as required. What do you think?

Is it best to issue it in magazine form, or a manual, or a paperback, or even a disc? And should it also include a directory

of suppliers and services, based on the advertisements and perhaps a list of software and equipment too? Or do you think future issues of 8000 Plus should have a page of 'Best Tips of 1986' etc? What do you think?

Ron Denyer  
Manchester

**8000 PLUS** Now if you'd had a subscription instead of waiting for your friends to give you their copies of 8000 Plus - a process which can take up to three years as you've discovered - you'd know that we've already done as you suggest. Rob Ainsley's *Tipsoffs* book, ring bound to leave you both hands free for typing, can now be ordered from Somerton (see p. 81 of this issue). A special edition bound in Alligator skin or to match the *FILEFAX™* of your choice is under consideration.

## Miss spell?

I am a victim of planned obsolescence. My 9512 PCW printer is hors de combat. The part required is unobtainable by the company with whom I have a maintenance contract. What do I do? I do not want another Amstrad printer. What have other readers done in this situation?

R Rappaport  
London

**8000 PLUS** Is that how you spell 'hors'? Oh well, live and learn. All parts for all Amstrad printers, and indeed all other Amstrad parts, are available from CPC (Combined Precision Components PLC) who do trade distribution of Amstrad spares. Ring them for a quote on 0772

55034. I suspect your dealer was telling you a little fib; either that or he doesn't actually know how to do his job. Perm any one from two.

Buy another printer if you like, we can't recommend anything in particular since you give us nothing to go on. But if you aren't using an upgraded LocoScript 2 (2.29 is the latest) exclusively then you will have problems. You need the built in printer connected to get the extra one to work under CP/M.

## Contentious quotes

I refer to David Langford's pieces, in the August and September issues about quotation marks. My memory of (long ago) schooldays is indeed that double quotation marks are the norm. However coming from a family much involved in the printing trade, I always understood that 'Hart's Rules for compositors and readers' was the 'bible' for authors and printers and I quote from it: 'Single "quotes" are to be used for the first quotation; then double for a quotation within a quotation. If there should be yet another quotation within the second quotation it is necessary to revert to single quotation marks.' The opposite of David Langford's contention

Norman Coltham  
Essex

**8000 PLUS** Treacherous ground this. In order to avoid any arguments we are devising new style guides for staff and contributors. All quotes will be identified with curly brackets, quotes inside other quotes will use a backslash and so on. Tim says 'That seems a very good idea but you said "What are we going to do about these quote marks Sharon?" When she said "Should I be single quotes to start with now?" We hope this will clarify the issue.

## A good idea

We have been both surprised and delighted with the response to the Useful Disk, the initial stock was sold out within one week of the launch. Because of this response, we are now considering a second Useful Disk, but we have run out of ideas for more programs. If any of your readers have an idea for a useful program or game, we are willing to listen.

David Greenough  
Bradford

**8000 PLUS** We here at Future Towers are all in favour of there being as many useful things in life as possible, however, please send your ideas direct to David Greenough at DGC Software, 37 Falkland Road, Bradford, BD10 0JT. Sorry, Did we hear him say a free Useful Disk (surely he

means disc? - Ed.) to everyone whose idea is accepted? It's rather a bad line.

## Feeling faint

Here's a funny (peculiar) thing. There was my newly-acquired 9512 printing its very first long document when, on the last page, the print became fainter and fainter. Hurried (I) look at the manual to abandon printing by which time nothing was coming out on the paper. A study of the ribbon showed it wasn't winding on. Wound it on with difficulty - same problem - and again - and again.

Dashed off to my favorite supplier. I thought he'd tell me that it was the first time it had happened, guv. But, surprise, surprise, he said it was a common problem with the ribbons supplied with the machines. Fifty per cent returns he said, yet no trouble with replacement ribbons. He then showed me the different wind-on constructions of the two types. Maybe you could comment, or even Amstrad!

Derek Lawton  
Sidmouth

**8000 PLUS** Amstrad didn't get to where they are today by commenting, you know. Not having an original ribbon in the place it's rather hard for us to comment either. We'll just take your word for it. If anyone has defunct examples of an original ribbon perhaps they'd like to let us take a look?

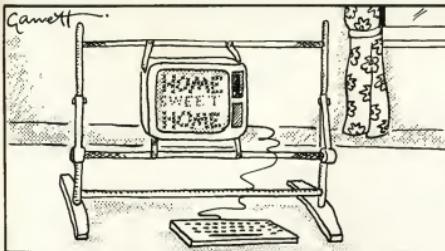
## Designs on you

Does anyone out there do counted cross-stitch and use a PCW? Counted cross-stitch, for those not in the know, is the sewing technique used in those homely samplers found on farmhouse walls all over America. It is done on square weave fabric and the stitches are, literally, counted out across and down the fabric. It's not a hobby for those with failing eyesight!

The U.S. counted cross-stitch magazines carry advertisements for a program to do the design stage on a computer and print out the result. That would be a great help to us and save an awful lot of graph paper, but those dreaded words appear: 'IBM PC Only'. We've scoured the computer press and counted cross-stitch press here and can find no program that would run under CP/M, let alone on the PCW. Do you, or any of your readers, know where we might find a program to do this job?

Lola and Martin Taylor  
Lancashire

**8000 PLUS** It wouldn't be all that difficult to



design a program to do the job in Basic; it's certainly up to the job. The problem is that no one is likely to do it for nothing, few people, we suspect, combine an interest in programming and counted cross stitch to the extent of writing such a program for fun. If we're wrong write in and tell us so.

## Uneasy of South Harrow

As a regular reader of your magazine who happens to be gay I am not sure how to take the September offerings in the Postscript pages. I presume the 'queer quip' mentioned in the banner for these columns refers to the remark about panties in your reply to David Aldred. Whilst I appreciate the humour injected into what could otherwise be pretty dour pages I am nevertheless uneasy about this kind of joke.

What with anti-gay legislation introduced by this government and a huge increase in bigotry sparked off by the AIDS crisis this kind of humour makes me feel very uneasy. I suggest queer and panty jokes will be acceptable when you feel happy about making nigger or wop jokes. Until then please take more care - unless you are deliberately trying to lose your gay readers.

Brian Perry  
Middlesex

**8000 PLUS** It seems we can't say anything without offending someone these days. The homosexual lobby are being a bit greedy in claiming all insults for themselves, not to mention hijacking perfectly good words for their own purposes. Can I no longer say queer without meaning homosexual? How many more words do you want? Why not try being a little less precious and demonstrate some of the tolerance you demand from others?

## Out of luck, and data

I have just bought the 8000 Plus Software Collection and, apart from having to return the first disc because side two was faulty, it seems fine and will, I hope, be very useful.

However, I've come up against a snag when preparing a disc for the GSX listings. I have an 8256 and on trying to copy the programs on slide 4 of the systems disc, I find I can't copy DDFXHR8.PRL. What comes up is ERROR: DISK WRITE NO DATA BLOCK - M: DDFXHR8.\$\$\$ On running DIR the program is there but it seems I can't copy it. I used the original systems disc, not the backup. Can you explain this and how I can get round it?

P.D'Arcy  
Champney  
East Sussex

**8000 PLUS** There is a fault with the disc. Even though the directory entry is present there are no guarantees. The directory just says what it is and where it should be but when a program goes looking it may not find it - as you've discovered. Your only recourse is to ask Amstrad if they'll swap your faulty disc for a good one. Phone customer support on 0277 230222.

## A real character

Please accept my thanks for your earlier help with the LC-10 printer (*I do - Ed.*). Locomotive led me to understand that there was no simple way in their software to make use of the printer control commands offered by the LC-10 so I tried Protext. This appears a great improvement in many respects, except for simple correspondence and available symbols.

The very limited range of symbols is a problem in scientific work. My question is: is there no way of exploiting the symbols shown in the LC-10 handbook in the IBM character set (pp. 102-103)? Surely if these have been constructed in the printer software they could be got at?

N. O. Clark  
Cornwall

**8000 PLUS** Codes to display characters in the extended ASCII character set can be defined using the KEY command, thus allowing any character for the PCW character set to show onscreen. To get it

onto the printer is a little more complex. For this you need to build a printer driver especially for the LC-10 in IBM mode. You should be able to do this using the Protect SETPRINT utility (and we aren't going to explain the whole process because it would take an article to itself - heavy work with the manual is called for).

## Life is hard, then you die

I have just started using Protext, and would recommend it to anyone. It is easier to do some things with LocoScript but the speed plus the extra features makes Protext the winner for me. I see that you are selling Newword, has there ever been, or do you ever plan to do a review of it?

I am using a Star LC-10 with a PCW9512. Regarding problem of printing NLQ justified text in LocoScript 2, namely that the print head goes across the page in a series of jerks. I have found the best solution is to use the LX800 driver. Justified text then prints out perfectly. The problem is that Bold and Double-strike don't then work. Will Locomotive ever produce printer drivers that fully support such printers as the LC-10? This problem doesn't exist in Protext.

The main reason that I'm writing is that I would very much like to print the Greek characters with LocoScript 2. The printer accepts download characters. Star Micronics have informed me that the printer will print the characters, as long as they are downloaded to the printer. I have written to Locomotive to ask if there is a printer driver that will download them to an LC-10. It seems that the answer is no. So therefore, how do I get the Greek character set downloaded without buying a 24 pin printer, which I don't wish to do?

Edward P. Drohan  
London

**8000 PLUS** As we understand it the Printer Driver discs from Locomotive now support the full range of Star printers. The Star LC-10 manual goes into great detail concerning designing and downloading new characters including supplying a sample Basic program. This is the simplest method for downloading characters.

## Thesis good

I received the leaflet from Amstrad announcing 'Thesis PS now available'. The quality of the typeface shown as a sample in the leaflet left much to be desired, but hoped that was something to do with the production of the leaflet and not with the wheel. I rushed to buy one for myself.

I am now writing the letter with the wheel after following the installing instructions. As you can see, the individual letters are very unevenly placed in relation to the line and many of them are poorly shaped. This is very inferior to the other daisy wheels I have used. I wondered if mine was a faulty wheel and wrote to Amstrad Consumer Services. Mrs H. Guy referred me to Keytec Industries Ltd. whose Sales Administrator, Janet Jones, offered to have my wheel inspected by their technical department. She then sent a replacement, which proved to be identical. She says that they have no plans to manufacture any additional wheels for the Amstrad range.

J. Goodacre  
Leicester

**8000 PLUS** We passed your letter around the office for comment and we have to say that it seemed reasonable to us. The letters appear smaller than those on a Courier wheel but nevertheless the effect is pleasant enough. A case of horses for courses perhaps?

## Larger than life

In your reply to N.O. Clark in a Tipoff question you revealed that the editor has a Star LC-10 printer. So maybe you have discovered how to do what neither I nor, apparently, N.O. Clark have been able to do, namely, access the very large fonts in the printers built in fonts, so as to use them in Locomotif 2.

T.W. Alfred Poland  
Portugal

## 8000 PLUS No.



## Horror story

I bought a PCW8256 in February and discovered to my horror that Mallard doesn't support graphics; I've copied A.M. Baldwin's 'Surfaces' and played with it to produce some weird and wonderful landscapes, but I'm a haematologist, not a mathematician, so I can't sort the algorithm from the program - I learnt my programming by the suck it and see method on an Apple II at work.

I want to use my PCW to calculate and draw cave surveys, and rotate them as necessary. Where can I get the info. (or software) to do this? I live in the sticks, and the nearest thing to a computer shop around here is Dixons. Don't suggest the library - their computer books are mixed up with Erich Von Daniken rubbish.

**Bill Edmondson**  
North Yorkshire

**8000 PLUS** You are asking rather a lot really, especially if you aren't a mathematician. Programming 3-D graphic structures is one of the current problems pushing very powerful computers to their limits. As for rotating them as well - well! To get some idea of the problems involved, and the solutions, see the answer to 'A new recruit' in *Tipoffs*.

## Sunny days

It was a hot Saturday afternoon; why should I sit inside doing (inescapable) work with my PCW, while my family go out to enjoy the sun? With a simple extension cable I can go to work outside, in the garden. But as soon as I try to start up, disaster strikes! Drive B is empty... and all my most valuable Locoscript files on it. Rebooting makes it worse, now Drive B isn't even ready. From CP/M, I get the same story. Not ready.

It must be my fault; my PCW has worked well for two years now. The B Drive was home installed, so something must be wrong there. To

take off the back, I have to take the machine indoors. My efforts are rewarded when it all works again, yes the Drive B too! Triumphant, and without even switching the power off, I carry my beloved PCW outside again and... you've guessed it, Drive B is again not ready.

**Roy Smiles**  
Bournemouth

**8000 PLUS** This is as bad a case of garden gnomes as we've ever come across. As you know garden gnomes (*gnomus herbaceus*) are a harder species of the more familiar goblin (*gnomus domesticus*). Rotating your PCW three times widdershins in moonlight on the fourth Thursday after Septuagesima will cure the problem. Disconnect from the mains first.

## Electronic talk

To Anthony N K Johnson in the September issue. 'You are about to b\*\*\*\* your PCW'. To anybody else who is contemplating taking up his suggestion, don't. Removing the heater supply from the tube whilst leaving the EHT voltages applied runs the definite risk of stripping the cathode. For the non-technical - the doohickeys that make the green marks on the screen stop working. Regrettably, Anthony's submission is also faulty in terms of electronic failure. Modern solid state circuits survive switching on and off remarkably well. The bit that suffers when gadgetry is switched on is the HEATER, the very thing that he still switches.

The normal method of holding a piece of equipment at 'stand by' is to remove the HT voltages and leave the heaters on. Doubtless the PCW's circuitry could be modified to do this but I doubt if it would be worth the trouble. If you want to keep the PCW live then simply leave it on, it will come to less harm that way. But what are you doing with all the valuable seconds you are saving by not having to re-boot?

I'm sorry, Anthony, but the

advice from this friendly electronics engineer is to ask your guy to disable his switch.

**M S Tipper**  
Lincoln

discs being made in such places as India which are truly unreliable in any drive. But those sold by Maxell and the genuine article from the far east should be good for either drive. Perhaps your disc drive is simply getting a little cranky?

## Clean machine

I own an Amstrad PCW 9512 and have a friend who has an 8512. We went to the exhibition at Earls Court last week (so did we - Ed.) and at one of the stands we were induced to buy a 'head cleaning disc' for £1.50.

The instructions tell one to insert the diskette and then to activate the drive mechanism for approximately 30 seconds. As neither I nor my friend could make sense of this I telephoned the Amstrad consumer advice number and asked for help. Their first piece of advice was to press the space bar (with the diskette in the drive); but this had no effect at all with the cleaning disc remaining stationary.

I called Amstrad again and this time was told that they didn't recommend the use of this type of cleaner as it could damage the disk drive heads. This leaves us £3 out of pocket and distinctly puzzled as to whether or not we should clean our heads, and if so, how and how often? The salesman suggested once a week.

**John Engle**  
London

**8000 PLUS** The only reason for wanting to clean the disc drive heads is if you are getting read and write errors on a variety of discs. Otherwise they are working perfectly.

To engage the heads with a cleaning disc press [IT] from inside Locoscript or do a DIR or [ALTc] from CP/M. The drives will whirr and an error message will come up to the effect that the disc couldn't be read - hardly surprisingly. Repeat to taste.

There is a lot to be said for the old advice - if it isn't broken, don't fix it.

## Better software

Here's how to improve your Good Software Guide.

- 1/ Use symbols that differentiate clearly between the pluses and minuses. Those tiny black triangles look far too much alike whichever way up they are.
- 2/ Include the date of the issue of 8000 Plus in which the item was last reviewed. This would save a lot of digging around among indexes and back copies.

**8000 PLUS** Here's how to improve your living room. Get rid of that awful wallpaper and put up a nice William Morris design in that red furry stuff they have in steak bars and then (continued page 93).



## Double or quits

'Hmmm' do you say? (Page 8 Issue 37). I would willingly pay a little extra for double density discs. Using single density discs for the B drive used to give me lots of those 'Address mark missing' messages referred to by Mr Ward (Strange but true on page 95 of the same issue.) Unlike him I don't seem to be able to recover them with a vacuum cleaner.

**Douglas Garbutt**  
Guildford

**8000 PLUS** Apparently there are a few

# ★ Advertisers Index ★ Advertisers Index ★

A-Z Computer Services.....	61	DGC.....	.32	Micro Media.....	.55
Abacus Software.....	74	Data Access.....	.66	Micro-Tyne.....	.61
Advantage.....	64	Dataline.....	.74	Miles Better Software.....	.89
Aladdin.....	64	Dunning.....	.80	Moonstone.....	.72
All Media Services.....	49	Embleford Hi Tec.....	.77	Newstar Software.....	OBC
Amstrad Pro. Use Club.....	4	Exemplar Design.....	.71	PCW Software Library.....	.66
Ansible Information.....	49	Groundwork.....	.56	PCW World.....	.68
Apex Computing.....	66	HD Design.....	.49	RSC.....	.30-31
Armor.....	58	HSV Computer Services.....	.72	Rombo.....	.71
Astrocalc.....	61	HTB Computers Ltd.....	.77	SBS.....	.9, 80
BBD Dust Covers.....	56	Headline.....	.77	SCA Systems Ltd.....	.32
Bradway Software.....	68	Home Based Business.....	.80	SK Marketing.....	.28
Brainstorm Software.....	89	Infraset Ltd.....	.55, 64	Selec Software.....	.80
CP/M Ltd.....	42	JEM.....		Silicon City.....	.16
Caspell.....	13	John Fisher.....	.61	Software Imperative.....	.37
Cavalier Software.....	42	K&M Computers.....	.64	Suredata.....	.68
Composit Software.....	56	Kavin Computer Supplies.....	.52	Thurston Techniques.....	.55
Compumart.....	IBC	Keystrokes.....	.80	Timatic Systems.....	.71
Comstax Ltd.....	32	Laser Images.....	.72	Topologika.....	.77
Connect Systems.....	45	Locomotive.....	19, 22-23	Tudor Systems.....	.74
Copy Comm.....	49	MJC Supplies.....	.41	Vital Software.....	.66
Cornix Software.....	38	McGregor Software.....	.56	W.A.V.E. ....	.42
Creative Technology.....	9	Margin Maker.....	.71	West of Britain.....	.6
DGA.....	74	Meridian Software.....	.68	Wight Scientific.....	.72
				Worldwide.....	.77

# ★ Advertisers Index ★ Advertisers Index ★



## A Complete Service in Computers & Software.

**Miles Better Software**  
219/221 Cannock Road,  
Chadmoor, Cannock  
Staffordshire, WS11 2DD  
Telephone:  
(0543) 466577/8/9

### Word Processing

Locoscript 2	£24.00
Locoscript 2 + Locapell 2	£33.00
Locopell 2	£18.70
Locopell 2 + Locofont	£21.50
Locofont 2	£13.00
24 Pin Drivers 8256/8512	£21.00
24 Pin Drivers 9512	£21.00
Tasword 8000	£17.95
Tasword 9000	£17.95
Tasprint	£17.95
New Word II	£74.95

Desktop Publishing / Graphics	
AMX Stop Press	£36.40
AMX Stop Press + Mouse	£36.40
AMX Desktop + Mouse	£62.00
Desktop Publisher + Mouse	£62.00
Master Scan + Paint	£67.00
Master Paint	£15.00
Digital Image Design	£29.00
Digital Research Graph	£29.00

### Integrated Packages

Mini Office Professional +	£34.95
Spell Checker + Thesaurus	£18.95
Plan It Plus	£15.00

### Databases

Masterfile 8000	£30.00
Datasette II	£27.00
Locodbase 8256/8512	£27.00
Locodbase 9512	£27.00
At Last Plus	£24.95

Just a selection from our vast range of computer software.  
All goods sent within 24 hours.

All Prices include VAT and Delivery  
Please make cheques, postal orders payable to:  
"Miles Better Software"  
Access/Visa orders, please phone for immediate  
dispatch.  
Visitors Welcome.

### Utilities & Program Development

Turbo Pascal.....	.569.00
C-Basic Compiler.....	.29.00
Pascal MT+.....	.29.00
Robot 2.....	.29.00
DataFax.....	.52.95
Easy Labeller 8256/8512.....	.29.00
Easy Labeller 9512.....	.29.00
Handy Labeler 9512.....	.29.00
HiSoft Devise 80.....	.32.95
HiSoft Kniles Plus.....	.16.95
Super Type.....	.19.95
Micro Design II.....	.24.95

### Spreadsheets

SuperCalc 2.....	£42.00
Cracker II.....	£39.00

### Accounting

Accounts Plus.....	£29.00
Popular Accounts.....	£69.00
Invoicing.....	£42.00
Payroll.....	£42.00
Micro Tax.....	£29.00
Personal Tax Planner.....	£18.95
Stockmarket.....	£29.95
SHS Cash.....	£45.00
Map Integrated Accounts.....	£110.00

# BRAIN STORM

Successful projects, reports, courses, meetings and presentations can be yours with BrainStorm

- It's an ideas organiser
- It enhances and encourages your thinking and creativity
- It lets you build and rearrange maps of your thoughts
- It's so fast, it never impedes your creative flow
- It's quick to learn and is genuinely easy to use
- It's a tried and tested product with thousands of users
- It comes with a full tutorial and reference manual
- It's sold and supported by the experts — its authors

Please send me:

Amstrad PCW disk-only  
The manual is on disk in both  
LocoScript and ASCII text formats.  
 Further information.

My name is.....

My address is.....

£29.99  
all inclusive



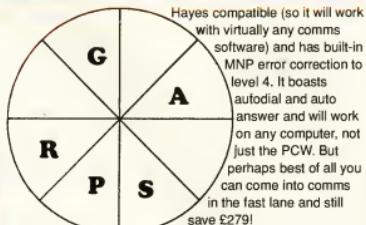
Please make your cheque out to BrainStorm Software Ltd. Our address is  
18 Courtlands Close, Ruislip, Middlesex HA4 8AX. Tel: 0895 677845.

# COMPETITION

A chance to get into the fascinating world of electronic communications this month with a new Hi-Tec EC2400 modem

**N**ow having the full blessing of BT's approval Hi-Tec are celebrating by offering one of their new full-featured modems in our easy to enter competition. Yes, enter this one and 8000 Plus might bring you more than Santa this Christmas.

This stylish stand alone modem has all speeds from 300/300 to 2400/2400 (V21,V23,V22 and V22bis), is fully



Hayes compatible (so it will work with virtually any comms software) and has built-in MNP error correction to level 4. It boasts autodial and auto answer and will work on any computer, not just the PCW. But perhaps best of all you can come into comms in the fast lane and still save £279!

And what do you have to do to win one of these highly desirable high-tech Hi-Tecs? Simple enough, just complete the Word Circle on the right (as supplied by Thomas Jones) by filling in the missing letters so that it forms a computer-related word.

Send in your entries on a postcard or the back of a sealed envelope to 8000 Plus Competition, 4 Queen Street, Bath, BA1 1EJ. The closing date is December 20th so don't delay.

## This month – next month

This has certainly been another exciting issue. Who'd have thought that the ever so humble PCW might be the vehicle for a software product as important and innovative as Composers Pen? There really is nothing quite like it on any other system that we know. Once again it goes to show that it isn't so much the computer that counts as the programmers who make it actually do something. In this case something not seen before.

There seem to be quite a few games appearing on the PCW again, or threatening to appear. We know of several in the pipeline that we plan to look at. Could it just be that time of year again?

The end of the road for our current series on SuperCalc this month, with black boxes finally having some light shone into them. It took us a while to get there but we've finally done it. Many thanks to Tim Nott for the series.

A final thought: the PCW, more than any other machine, attracts enthusiasts who use it at home for purposes other than game playing. This month we took a look at the changes to copyright law for the writers and programmers. If there are other subjects that affect you that you'd like covered – write and tell us.



### Databases catalogued

A look at the general purpose databases in the PCW market. If you're thinking of buying a database this is the one you don't want to miss.

### Interfaces

To get out into the rest of the world, even to use a printer, you'll probably need an interface. We tell you what they are, how they work and look at those available.

### Daisywheels

The secrets of printing using more than one wheel in a document.

### New Protectext characters

How to print in different languages using Protectext. Ian Goodhardt uses Protectext to print in Hebrew!

### LocoScript layouts

How to design a good looking page template under LocoScript.

### CP/M

We look at the often misunderstood RPED text editor.

### Databases on-line

A modem can give you access to enormous commercial databases.

### Pampering your PCW

Treats and tips to help your machine live longer

# Compumart

A Great Deal More For a Good Deal Less!

Free  
FAST  
DELIVERY

**Amssoft**  
3" CF2 DISKS



Don't risk losing  
your valuable data

- Genuine Amssoft
- Guaranteed Quality and Reliability
- Buy from the UK's LARGEST SUPPLIER

## PCW SOFTWARE

Now you can buy any software title from Compumart and  
GET 10% DISCOUNT ON RRP PLUS FREE DELIVERY

And with Compumart's  
**'SIX-OF-THE-BEST'**

You can take advantage of super low prices with  
savings UP TO 32% BELOW RRP !

Just look at the six great titles below and they  
will 'KNOCK YOU FOR SIX'

- **MASTERFILE 8000** (Cambridge Systems) £29.90
- **MINI OFFICE** (Database Software) £29.90
- **PROFESSIONAL PLUS** £29.90
- **MONEY MANAGER PCW** (Connect Software) (New improved version!) £19.90
- **DESKTOP PUBLISHER** (Database Software) £19.90
- **LOCOSCRITP 2** (Locomotive Software) £19.90
- **LOCOCFILE** (Locomotive Software) £24.90

(Please specify PCW 8 or 9 Series)

BOX OF  
**FIVE**

Only  
**£11.90**  
Ex.VAT

AMSOFT  
CF2  
3" DISKS

BOX OF  
**TEN**

Only  
**£21.70**  
Ex.VAT

## 'SUPERSAVERS'

### CLEAN 'N' TIDY KITS

TAKE UP A  
GREAT OFFER  
WITH OUR  
SPECIAL  
KIT PRICES

PCW 8 SERIES £20.76  
(Normal RRP £29.43)  
PCW 9 SERIES £20.12  
(Normal RRP £29.03)

### AMSTRAD ASF9512 AUTOMATIC SHEET FEEDER

**NEW**  
Designed for your PCW 9512 system to save you  
time and frustration!  
• Feeds up to 30 sheets at a time  
• Colour-coded  
• Complete with two sets of front and back  
• Fits on your PCW 9512 in seconds

NEW PRODUCT ONLY £99

IDEAL FOR  
MAIL SHOTS  
OR MULTIPAGE  
DOCUMENTS

## AMS 30L STORAGE BOX

### AT LAST, ITS HERE!

Just what you've been waiting for!  
Successor to the ever popular AMS 20L is the all new

AMS 30L Deluxe. Following on the footsteps of the  
20L, the UK's best selling 3" disk storage box, the  
AMS 30L is at the highest quality.

- High impact resistant, anti-static plastic  
construction with inner smoked lid panels
- Hinged lid with key operated security lock
- Stepped base for easy disk selection with a  
capacity for fifteen 3" disks, either  
cased or uncased
- Can accommodate up to thirty  
3" uncased disks
- Redesigned throughout and now  
attractively finished in grey



ONLY  
**£11.26**  
EX. VAT

SPECIAL INTRODUCTORY OFFER  
ONLY FROM COMPUMART

## MISCELLANEOUS

### PRINTER RIBBONS

Genuine Amstrad or quality compatible ribbons at  
SUPER LOW PRICES!

AMSTRAD		QUALITY COMPATIBLE	
PCW 8 SERIES	PCW 9 SERIES	FABRIC / CARBON	FABRIC / CARBON
£4.25	£4.60	£2.90	£3.50
£2.95	£3.95	£2.40	£4.20

Minimum Order - 2 ribbons unless ordered with other items.  
Prices are per ribbon and ex. VAT.

### PRINT WHEELS

GENUINE AMSTRAD PCW9512  
PRINTWHEELS

LETTER DOTMATIC	MINI GOTHIC 15
THESES PS	RECTA 10
RECTA 10	DRAG 10
DRAG 10	SCRIPT 12
SCRIPT 12	COURIER 10
COURIER 10	PRESTIGE 12
PRESTIGE 12	PRESTIGE PICA 10

**£5.90 EA**  
EX. VAT

### CLEANING KITS

CLEARHEAD (3" Drives)

Safe data storage
Easy to use
Protects disk and drive life
<b>£5.90</b>

CLEANPRINT (PCW Printers)

Protects print head
Maintains print quality
Protects and lubricates print head



8 SERIES £5.90

9 SERIES £5.20

### MISCELLANEOUS

LISTING PAPER 11" x 9½" 80gsm,  
1000 sheets, £7.50  
£13.00

DUST COVERS  
High quality protective PVC  
PCV 8 Series - 2 Piece £7.80  
- 3 Piece £8.60  
PCV 9 Series - 2 Piece £7.80

AMSCASE  
3" Disk Storage Case  
(Holds 10 disks) £5.90

**24HR ORDER HOTLINE (0509) 610444**

**Superb**  
Service

**Great**  
Guarantees

**Better**  
Back-up

- ▷ Usually same day despatch on most items
- ▷ Free fast delivery on all items.
- ▷ Please allow 2-3 days
- ▷ Large stocks for immediate despatch
- ▷ FAST, efficient service

- ▷ If any item proves to have a manufacturing fault within 30 days we will replace free of charge or refund in full.
- ▷ After 30 days and within the warranty period, we will repair at our expense

- ▷ Friendly advice and after sales support
- ▷ Any problems quickly resolved to your complete satisfaction
- ▷ Special offers to existing customers
- ▷ We aim to please... and usually do!

All prices exclusive of VAT

Prices/delivery subject to availability and only applicable to UK mainland, N. Ireland and BFPO's. E&OE  
Compumart are licensed credit brokers. Simply ask for written details.

**Compumart**

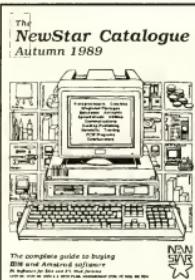
A Great Deal More, For a Good Deal Less

COMPUMART LTD  
FREEPOST (80+)  
LOUGHBOROUGH  
LEICS LE11 0BR  
TEL: 0509 610444  
FAX: 0509 610235

# NEW STAR SOFTWARE

THE OLD RECTORY, LONDON ROAD, WIDFORD, CHELMSFORD CM2 8TE, ESSEX.  
TELEPHONE 0245 265017, FAX 0245 263969, TLX 995143

## New Star Software's Autumn 89 catalogue is now out!



- more products
- prices shown inc & ex VAT
- extensive buyer's guide information
- network and multiuser pricing
- feature cross ref charts
- Expanded PCW section
- Business software
- Entertainment software
- FREE**

- just ask!

## NewStar Software: Original and best

Over 3 years of supplying software for the PCW user makes NewStar probably the most experienced company in the marketplace.

We were there from the launch of the PCW with any CPM

software transferred to 3" disk on request; and our classic CPM applications, *Touch 'n' Go*, *NewWord* and *Cracker* are still the best in their respective fields.

Several feature data and skill portability to MSDOS (IBM PC) systems, so skills learned on the PCW can be carried forward with no wasted effort.

## From PCW to PC, and back again

Included in an expanded PCW catalogue section, is the latest edition of Software Technology's versatile CSTAM: the simple to use serial file transfer utility: available with 3" PCW disk, 3.5" and 5.25" PC disks.

Move files between any combination of these systems using the serial connector lead supplied.

- CSTAM £49.95**
- PCW Serial interface £59.95**
- CSTAM and interface is purchased together £99**

Prices here are EXCLUDING VAT  
All registered trademarks acknowledged.

## Celebratory Offers!



To mark the appearance of our first major new catalogue for over a year, we are giving away a free copy of the *Trivial Pursuit* game, or for the more serious minded user, a copy of the outstanding keyboard trainer, *Touch 'n' Go* - with each order for £50 worth of PC software, accompanied by a copy of this advert. Offer applies until September 30th 1989.

## More for the PCW owner than ever

By popular demand the PCW section has been expanded, and includes the complete *Loco* selection from *File to Font*.

Displaying is the usual commitment to be much more than just another software vendor's flag sheet, the all-new *New Star Software Buyers' Guide and Catalogue* is available free of charge - just call/write for your copy.

There are 64 pages describing a complete range of IBM PC (and compatible) software, plus an expanded section covering the best of the PCW software.

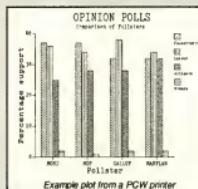
Accounts, wordprocessing, database and graphics are all covered.

Check and see if your local software stockist has the *New Star* catalogue available - and if not, ask them to get some in, but don't delay before getting your free copy!

## Cracker 2 Turbo

### still the only high res graphic spreadsheet for PCW users

The range of features and functions in Cracker remains



unparalleled for the serious spreadsheet user. And don't forget, like *NewWord*, Cracker users can upgrade to MSDOS and CDOS systems, taking all data and experience as you go!

- Cracker2 £60.00**

## NewWord2:

### the classic alternative WP for the PCW

Lost in LocoScript? You may be surprised to learn that the most refined *WordStar* work-alike of them all has been available to run on the PCW since long before LocoScript was dreamed of!

*NewWord2* operates under the CPM operating system, and uses the universally recognised codes that allow trans- portability of the skill to virtually any micro computer - including systems operating under CDOS and Unix! What's more, the files are directly transferable!

- NewWord2 PCW £60**
- NewWord2 with Polyprint typeface sets, if purchased together £99.95**
- Upgrade NewWord2 PCW to IBM PC edition £39.95**
- Upgrade NewWord2 PCW to IBM PC edition with STAM file transfer utility suite £60**

(Return of original master disk required with all upgrade purchases)

## PaperBack Support

Don't forget that our affiliate publishing company, *PaperBack Software UK*, operates a comprehensive hotline and support service on all its published products.

Extensive support, close integration of the facilities of UK published applications and the easy transfer of skill and data to other types of computer software like *Cracker* and *NewWord*, makes *PaperBack Software* the logical solution for all UK users.